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ABSTRACT

The User's Guide to the Regional Study of Higher Education in Agriculture and Home Economics in the South explains the purpose and organization of the study, one of three phases of a larger investigation being conducted by collaborating researchers in several Agricultural Experiment Stations. The guide provides a detailed description of the methodological procedures and data files employed in the study, which involved determining what aspects of social origins, high school and work experience, and college entry influenced the choice of and attitudes toward an agriculturally related major for over 40,000 Agriculture and Home Economics students at 38 land grant colleges (both 1862 and 1890) and other universities. The discussion of methodology includes the development of instruments, sample design, data collection, response rates, data file specifications and usage, and sample weighting and variability. Appendices include the student and institutional questionnaires. The guide has been prepared for and is available to interested researchers. (SB)

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METHODOLOGY AND DATA FOR A STUDY OF HIGHER EDUCATION IN AGRICULTURE AND HOME ECONOMICS IN THE SOUTH:

A USER'S GUIDE,

VOL. 1

Frank M. Howell Dale Parent

Mississippi State University

May, 1979

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NATIONAL INSTITUTE OF EDUCATION

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Foreword

The Regional Study of Higher Education in Agriculture and Home Economics in the South was undertaken to determine the background characteristics and the factors underlying career choices and plans of students majoring in agriculture and home economics. Interest in this particular group of students is based largely on the fact that colleges of agriculture and home economics have experienced near phenomenal enrollment increases in recent years.

The study is a USDA-CSRS supported project. It is being conducted by officially designated members of the S-114 Technical Committee whose names and institutional affiliations are listed in Appendix A of this document. Most of the members were affiliated with a predecessor project, which was also a regional study. The S-114 project, entitled "Defining and Achieving Life Goals: A Process of Human Resource Development," is a continuation and an expansion of the predecessor project, designated S-81. Expansion of the S-81 project included two additional research objectives, one of which (Objective 3) is the study of students enrolled in colleges of agriculture and home economics in the Southern Region.

Objective 3 of the S-114 Project is a large-scale effort involving a universe of more than 40,000 students 38 institutions which are land grant colleges and universities. Data collected ranged from background through high school and work experience to life goals and attitudes.

This User's Guide provides a detailed description of methodological procedures employed in the study (Vol. 1) and of the data file (Vol. 2). It has been prepared for and is available to researchers who might wish to utilize the data.

A research project of the magnitude of Objective 3 of the S-114 study requires the cooperation of many people and the coordination of many detailed operations. Expressions of gratitude are due the Directors of Experiment Stations in the Southern Land Grant Colleges and Universities for their support. Dr. Jarvis E. Miller of Texas A&M University, former Administrative Adviser to the Technical Committee, and Dr. Kenneth R. Keller of North Carolina State University, present Administrative Adviser, are due special expressions of gratitude for their guidance, interest, and encouragement.

Appreciation is expressed to the Deans and Directors of Resident Instruction, to the Resident Instruction Committee on Policy and its representative to the S-114 Technical Committee, Dr. John C. Robertson of the University of Kentucky, for their support and cooperation.

To all of those students who provided the data goes a special vote of thanks. A final recognition is due to the excellent secretarial skills provided by Janet Porter and Donna Brown in developing this document.

Carlton R. Sollie
S-114 Project Co-Leader
Mississippi State University

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Part 1. INTRODUCTION*

Agriculture, at least in the eyes of some students, has become a glamour field. Individuals also are more aware of the importance of food production and distribution, as concerns shift to basic human survival in the face of a growing world population. Students increasingly have recognized the need for advanced training in agricultural occupations. They also are aware of expanding opportunities in agribusiness, food production and distribution, agrifinance, farm management, and government agricultural agencies. Expanding employment demand and new recognition of the importance of food are primary forces behind new student attitudes toward agricultural education.

A second reason for the recent growth in agricultural training can be traced to changes in the structure of U.S. agriculture. Decreases in the number of farms and farm employees have been coupled with dramatic increases in the size of individual farms, the value of farm products and the cost of farm production. At the same time, the number of farm acres has remained nearly constant, meaning the fewer farmers are producing more food. Small black-owned farms have been particularly hard hit by shifting economies of scale in production agriculture. Traditional farming skills and a willingness to work are now rivaled by managerial expertise and access to capital as keys to successful farm operation. Many institutional and social restraints limited the access of small farm operators to the latter resources.

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*This section borrows heavily from a preliminary report, Molnar, Dunkelberger & Richards, "1890 and 1862 Comparisons: A Summary Tabulation Prepared for the Deans and Directors of Resident Instruction in Agriculture at Land-Grant Institutions in the Southern Region." Auburn: Agricultural Experiment Station, Auburn University. July, 1978.

An increase in specialization and differentiation of occupations is reflected in a demand for persons with technical skills and advanced managerial training, and a decrease in need for those with general agricultural training. Jobs have proliferated in off-farm industries that supply and service the farmer, while farmers themselves have diminished in number. Vertical integration and corporate "farmhand" agriculture have eliminated the family farm as a viable alternative for many individuals. Capital demands of modern agriculture often discourage the entry of individuals into farming, and their interests and aspirations often are deflected into farm-related occupations in the broad area of agriculture. These occupations are more likely to resemble those of the larger society; that is, white collar jobs, representing a narrow, or indirect association with the production enterprise. Farming, and agriculture in general, is viewed less as a way of life than a growing source of jobs and occupational advancement.

PURPOSE OF THE STUDY

The Regional Study of Higher Education in Agriculture and Home Economics in the South is one of three phases in a larger investigation being conducted by collaborating researchers in several Agricultural Experiment stations in the Southern region. The larger investigation, entitled "Defining and Achieving Life Goals: A Process of Human Resource Development" and designated project S-114, is documented elsewhere.* Its general objective is to provide information on the process of defining and achieving life goals for use in human resource development programs, and is supported through the Cooperative State Research Service (CSRS) of the

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*Copies of the project proposal are available from the Technical Committee Chairman (see Appendix A).

U.S. Department of Agriculture.

The study of Higher Education in Agriculture and Home Economics has as objectives the determination of background characteristics of students enrolled in colleges of Agriculture and Home Economics and factors underlying the career choices of these students. This paper serves as a documentation of the methodology for this phase of Project S-114.

Changes in the occupational structure of American agriculture are reflected in the curricula of colleges of agriculture. In most schools in the early fifties a half dozen or so options were available. Today, many schools offer three or four times that number. The research planned to accomplish the above objectives is viewed as necessary to obtain information relative to the social characteristics and career plans of youth who are now in college programs of training related to agricultural or home economics occupations. This research will provide an opportunity to investigate the perceptions of these youth regarding careers related to their fields of study.

As the spectrum of agricultural and home economics occupations has broadened, so has the range of people seeking careers in them. Recent national and regional publicity has called attention to the growing numbers of students in training to pursue agriculturally-related occupations. Many social subgroups, such as women, urbanites, and other traditional agricultural "minorities," are increasingly joining the ranks of "Ag majors." These mass media reports also indicate the growing importance of diverse specialities such as veterinary medicine, forestry, and home economics as concentrations in higher education. (Appendix G gives details on the trend of rising enrollments in Land Grant colleges)

*1862 AND 1890 LAND GRANT SCHOOLS**

1862 and 1890 institutions refer to different legislative acts that gave rise to the system of Land Grant colleges. Today, 1862 schools are the larger, predominantly white institutions in each state. The smaller, predominantly black agriculture schools comprise the 1890 institutions.

The Second Morrill Act provided additional funds for the First Morrill Act (1862) Colleges as well as initial funds for the 1890 colleges. These funds pertained to education and not research. Most of the new 1890 colleges existed before the act, and were designated as Land Grant colleges following its passage. They were located in each of 17 southern and border states in the cash crop areas where black people were most heavily concentrated. As such, none of the colleges are in Appalachia or in the Ozarks. Their origins were quite diverse, though most began as normal schools, or schools for the education of teachers.

From the beginning, the states did not continue 1890 funding for education in the agricultural and mechanical arts in proportion to the federal funds. Thus, from almost the outset separate but unequal standards prevailed.

Agricultural teaching programs at 1890 schools have suffered from years of underfunding. These schools rarely had strong support at the state level since most organized groups of agricultural clientele are supporters of the 1862 schools. However, it was not until the 1970's

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*This section relies heavily on "View of the 1890 Institutions" by R. Grant Seals, Pp. 409-416 in David L. Armstrong (ed.) Impact of Enrollments and Student Body Composition on Academic Program, Design and Delivery, 1977. East Lansing: Michigan State University.

that efforts to reduce funding inequities began to move forward.

Federal support for 1890 institutions has increased since 1967. Extension funds have been enlarged and, more recently, Hatch funds for research have been directed to 1890 institutions in larger amounts.

Agriculture enrollment 1890 schools continues to grow, as it does at the 1862 schools. However, agriculture majors account for nearly half the more than 1700 students enrolled at the 1890 schools, a much larger proportion than the 1862. Agriculture programs at 1862 schools may be larger and better-endowed, but 1890 schools have a far greater proportion of their manpower and enrollment committed to agricultural education.

Managers and designers of agricultural curricula, as well as those advising individuals making educational and career choices, should find that knowledge of the backgrounds, experiences and attitudes of contemporary agriculture students will facilitate their administrative and counseling effectiveness. Comparative knowledge of the two student bodies should increase mutual awareness and interinstitutional cooperation. The origins of today's agriculture students may differ strikingly from traditional conceptions and important differences besides race may characterize students at 1862 and 1890 schools. Their aspirations may reveal emerging themes and trends in agricultural education. It is these concerns that are addressed in the present study of agriculture students at southern universities.

PROJECT ORGANIZATION

The larger investigation of which this study is a part is organized around the project's Technical Committee. This committee is responsible for the execution of the investigation and, consequently, determines the research activities of the collaborating regional research group. Technical

committee members include the Project Leaders (see Appendix A) of contributing state-level projects appointed by the director of the respective cooperating State Agriculture Experiment Station, an administrative advisor to Southern Directors of Agricultural Experiment Stations, and a consulting representative of CSRS. Ex-officio members, who make input regarding project decisions and the dissemination of research information, include representatives from agencies such as the Clearinghouse for Rural Education and Small Schools, Educational Resource Information Center, Rural Education Program, Northwest Regional Educational Laboratory, Southern Rural Development Center, additional persons from participating agricultural experiment stations, and other interested persons.

Part 2. Methodology for a Regional Study of Higher Education in Agriculture and Home Economics in the South*

RESEARCH DESIGN

The research group originally conceived of this study as a rather descriptive one in which a basic social profile of the contemporary college student majoring in Agriculture or Home Economics curricula would be constructed from the results of the survey. It became obvious in early discussions and plans, however, that the level of interest in the current enrollment increase in colleges of Agriculture and Home Economics strongly suggested a more inquisitive look at *why* our respondents-to-be were in their particular majors.

CONCEPTUAL ORIENTATION

Aside from the profiling of questions regarding social origin and previous agriculturally-related experiences, the group was faced with electing to follow a more traditional "status attainment" (see Blau and Duncan, 1967) paradigm or conceptualizing the choice of agriculturally-related college curricula as somewhat of a developmental process such as that suggested by vocational psychologists (Ginzberg, et al., 1951; Super, 1957). These two approaches did not seem very satisfactory; such problems as establishing a "status hierarchy" for agricultural occupations or attempting to assess developmental sequences in college curricula "choice" from cross-sectional data were serious obstacles. As a compromise, the foci of the study were determined to be two-fold. First, a description of current undergraduate students in Southern colleges of Agriculture and

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*S-114/3 Working Paper No. 1

Home Economics would be undertaken. Second, viewing the "college experience" as a potential stage in the life cycle (see Dragastin and Elder, 1975) suggested that students' career-related attitudes are influenced by their exposure to differentials in career-related environments. On an abstract level, a basic question is how does one come to "major" in agriculture or home economics? On a more specific level, what aspects of social origins, high school and work experiences, and college entry influence both the choice of, and attitudes toward, an agriculturally-related college major?

An additional concern regarding "how students come to be" in colleges of agriculture and home economics is the nature of the particular institution the individual is attending. Since the institution is the most immediate environment that the student comes in contact with, we assume that this context has considerable influence over his (her) career attitudes. It was decided that some descriptive information gathered from college administrators in participating schools would be helpful in trying to determine tentative but plausible answers to the questions outlined above.

The S-114 group decided to focus on the following conceptual areas in developing and pre-testing survey instruments:

(1) Background
(2) Parental information
(3) High school data
(4) Work experiences
(5) College experience
(6) Life goals
(7) Attitudes

DEVELOPMENT OF INSTRUMENTS

In the early fall of 1976, S-114 researchers at several schools began to interview students majoring in agriculture and/or home economics at their respective institutions regarding the student's subjective impres-

sions of the factors influencing his (her) choice of an agriculturally-related major. Researchers at various participating experiment stations abstracted some qualitative "case study" impressions regarding this process of college major choice. These unstructured interviews of students tended to provide support for the delimitation of the seven conceptual areas of concentration for data collection as outlined above.

Early versions of the student instrument were pre-tested at three university campuses later included in the study. These results served to isolate many (hopefully all) of the items that proved too cumbersome to retain in the mail survey design format. By December, 1976, a preliminary draft of the pre-tested portions of the working draft instrument was edited and condensed into the final student form (see Appendix B).

MEASUREMENT CONTENT.

The measures developed for the student survey instrument covered seven areas (see above). These are demarcated on the questionnaire (see Appendix B). A brief overview by topic section is presented below.

Background variables consist of the general demographic information (such as sex, race, age, etc.), but particularly the R's college curriculum major, classification, and residential origins. *Parental Information* also includes similarly "standard" items involving parental employment status and educational achievements. The possibility of a generational link with some form of agriculture is addressed here with items concerning the residential origins of the R's parents and present affiliation with an agricultural production unit (i.e., farm or ranch). A descriptive item about the political orientations of the R and parents was included to examine the traditionally conservative image of the "aggie."

High School experiences thought to expose and therefore pose "pro-aggie" socialization for R were oriented toward past course offerings and extracurricular activities linked to agriculture or home economics. *Work* experiences were of a parallel focus.

College experiences were a topic that led to item utilization of a more direct, respondent-centered type (see Appendix B). Students were asked directly to rate the perceived influence of a checklist of *a priori* specified "significant others" on his (her) choice of college major (see Item 31). This significant other influence is not grounded in a directional form of encouragement as have other measures of similar influence (see Sewell, Haller & Portes, 1969) This modification was necessary since no known schema was found to exist for ranking either agriculturally-related (or home economics-related) majors or occupations. (The prestige ranking of agricultural occupations is an objective of an independent but affiliated project of the Texas Agricultural Experiment Station; see Cosby & Frank, 1978) In short, this cluster (Item 31) attempts to assess the *amount* instead of (or in addition to) the *direction* of encouragement from a structured set of influences. Other major-choice influences (Item 34) covered a range of factors that might enter into the *post hoc* rationalization of a college major. College organizations offering "professionalizing" experiences were included for the purposes of examining both their association with high school membership in similar organizations and their role in leadership activities. Sources of college financial support round out this set of items (Item 36).

The sixth section of questionnaire items concern *life goals*. Aspirations and expectations for several goal areas --- education, occupation, income, and residence --- anchor this set, with supporting items ascertaining the possibility of graduate work, and, if so, whether or not R

will remain at the same university and/or in agriculture or home economics.

The final section of *attitudes* (Items 47-62) contain Likert-type items comprising two hypothesized attitudinal domains: agricultural "feminism" and agricultural "ecology." The purpose of these items is to develop measures of constructs popularly conceived as partial explanations for the agricultural enrollment increase: young women who enter male-oriented agricultural majors are more "feminist" and urbanites who cross-over into such majors are more concerned about agricultural "ecology." The Ag Feminism Scale (Items 47-55) and the Ag Ecology Scale (Items 56-62) were developed from a larger pool of items and pretested for reduction to the final form during the Fall of 1976 on a sample of agriculture majors at a large university in the South. The last page of the student instrument contained items dealing with various stimuli regarding "Agriculture versus Other" and "Home Economics versus Other" students. Parallel forms of the set of stimulus items were provided for Rs in schools of Agriculture and Home Economics. These items were pretested during the Fall of 1976 along with the Feminism and Ecology Scales and proved satisfactory to retain in the mail questionnaire design.

*SAMPLE DESIGN**

DEFINITION OF POPULATION

The sampling design for the Regional Study of Higher Education Education in Agriculture and Home Economics in the south was constructed with the goal of sampling a subset of college undergraduates in Southern land-grant institutions who were majoring in agriculture or home economics

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*This section is a revised version of a draft prepared by Lianne M. Frank and Arthur G. Cosby, Texas A&M University.

during the 1976-1977 academic year. The Southern region was designated by the Technical Committee to coincide with the U.S. Department of Agriculture's delimitation of the region.** This designation includes the states of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas and Virginia. Within each state the sample design specified that the following institution be included in the sampling frame:***

1. The university or college with the largest enrollment of undergraduates in agriculture. In every case the 1862 land-grant institution was selected using this criterion. (Auburn University, University of Arkansas, University of Florida, University of Georgia, University of Kentucky, Louisiana State University, Mississippi State University, North Carolina State University, Oklahoma State University, Clemson University, University of Tennessee, Texas A&M University, and Virginia Polytechnic Institute and State University).

2. The university or college with the largest enrollment of undergraduates majoring in home economics. In most states this resulted in the inclusion of the 1862 land-grant college or section of home economics. However, in Florida, North Carolina, South Carolina, and Texas, the land-grant institutions were replaced by the programs at Florida State University, the University of North Carolina at Greensboro, Winthrop College, and Texas Tech University, respectively, which have the largest enrollments of home economics.

**The decision to use the USDA classification of the Southern region was made to allow possible comparability between the findings of this study and those of a proposed independent study of curriculum offerings in Southern colleges of agriculture by the Southern Regional Education Board.

***The terms "1862 school" and "1890 school" are popular references to land grant institutions established at these time periods. Although the trend is changing, students (and faculty) enrolled in the 1862 land grant colleges are predominantly white, while the students (and faculty) in the 1890 colleges are predominately black.

3. In each of the Southern states, the 1890 land-grant institution was designated as part of the sample, both for the agricultural and the home economics sections of the sampling. These schools included Alabama A&M University, University of Arkansas at Pine Bluff, Florida A&M University, Fort Valley State University, Kentucky State University, (home economics only), Southern University, Alcorn State University, North Carolina A&T University, Langston State University, Prairie View A&M University, and Virginia State College.

4. In addition, the college of Agriculture at Texas Tech University was included in the sample since it has such a large program (N=1542) and Tuskeegee Institute was also included because of its widely recognized role as a leader in agricultural education in the nation.

The sampling frame was determined by asking the Deans of Agriculture and Home Economics at each participating institution to provide S-114 researchers with a listing of students currently enrolled in their college, along with their classification and most current address. These lists were then modified by deleting those students who were classified either as special students or graduate students.

The actual sample selection was conducted in the following manner:

1. A fifteen percent random sample by colleges was conducted for both the colleges of Agriculture and Home Economics at the 1862 Universities (or their substitutes for certain home economic programs) and Texas Tech University.

2. A complete sample of 1890 schools and Tuskeegee was taken since the enrollment at these schools was usually less than 200 students in either agriculture or home economics. It was felt that it would be more practical to collect data from the complete population rather than to draw a sample.

Table 1 shows the schools selected, the number of students enrolled in programs of agriculture or home economics, specified sampling rate, and the number of students actually selected to be in the sample. Table 1A summarizes selected populations and samples.

The sample design for the student data collection, then, was a stratified random sampling model (consisting separately of the Agriculture student and Home Economics student samples). Students enrolled in the predominantly-black "1890" institutions were, in effect, oversampled to compensate for the anticipated lower overall returns and lower average enrollment in those schools. Since the entire population of agriculture and home economics students in these schools was selected (giving equal probability for element selection), the differential return rates between "1890" schools yields a *disproportionate stratified simple random sample* design. This approach assumes that the 1890 respondents constitute a random sample of students within each strata (or school). This seems to be the most feasible strategy to use with the present design, particularly since there are few tactics available that deliver unbiased or even consistent imputations for sample nonresponse (see U.S. Bureau of the Census, 1963). The bias due to selective returns is a given liability, especially among the 1890 strata.

ADDITIONAL "DISCRETIONARY" SAMPLE

In addition to the regional sample, a "Discretionary" sample was drawn for other research purposes. The institutions included in this "discretionary" sample are included in Tables 1 and 1A and are identified in the legend. Project researchers desired this extra sample for several reasons; these included the usefulness of having material to train coders and to develop coding guidelines, exploratory inter-regional comparisons of students, and small-scale intrastate comparisons and analysis for local dissemination. Although not described here, another stratified regional sample of 1862 schools was drawn for use in developing a prestige scale of agriculturally-related occupations. (see Cosby &

Table 1. Actual Populations and Sample Sizes in Sampling Frame

Name of Institution	College Type	Population Size	Sample Size Selected
Alabama A & M ++	AG	194	194
	HE	179	179
Alcorn State U. ++	AG	200	200
	HE	95	95
U. of Arkansas-Pine Bluff ++	AG	95	95
	HE	126	126
U. Arkansas-Fayetteville +	AG	691	104
	HE	322	48
Auburn U. +	AG	1340	201
	HE	671	101
Clemson U. +	AG	839	126
	HE	---	---
Delaware State ++	AG	83	83*
	HE	50	50*
U. Delaware	AG	950	143*
	HE	709	106*
U. Florida +	AG	895	135
	HE	---	---
Florida State U.	AG	---	---
	HE	751	113
Florida A & M U. ++	AG	150	150
	HE	181	181
Fort Valley State ++	AG	97	97
	HE	83	83
U. Georgia +	AG	1398	209
	HE	707	107
U. Kentucky +	AG	1295	194
	HE	652	98
Kentucky State U. ++	AG	---	---
	HE	81	81
Langston U. ++	AG	16	16
	HE	63	63
Lincoln U. ++	AG	73	73*
	HE	22	22*

Table 1. (Continued)

Name of Institution	College Type	Population Size	Sample Size Selected
Louisiana State U. +	AG	1294	194
	HE	635	95
U. Maryland at Eastern Shore +	AG	45	45*
	HE	29	29*
Mississippi State U. +	AG	1161	174
	HE	390	59
Murray State	AG	386	150*
	HE	156	150*
New Mexico State	AG	1457	437*
	HE	241	63*
U.N. Carolina-Greensboro	AG	---	---
	HE	756	113
N. Carolina State U. at Raleigh +	AG	2538	381
	HE	---	---
North Carolina A & T U. ++	AG	138	138
	HE	263	263
Oklahoma State U. +	AG	1905	286
	HE	1178	177
Prairie View A & M U. ++	AG	80	80
	HE	192	192
Southern U. ++	AG	123	123
	HE	70	70
South Carolina State U. ++	AG	---	---
	HE	152	152
Tennessee State U. ++	AG	149	149
	HE	265	265
U. Tennessee +	AG	1422	213
	HE	1193	179
Texas A & M U. +	AG	4151	625
	HE	---	---
Texas Tech U.	AG	1364	205
	HE	1401	210
Tuskegee Institute ++	AG	541	541
	HE	154	154

Table 1. (Continued)

Name of Institution	College Type	Population Size	Sample Size Selected
Virginia State U. ++	AG	79	79
	HE	130	130
VPI & SU +	AG	2473	371
	HE	827	124
Western Kentucky	AG	379	150*
	HE	501	150*
Winthrop College	AG	---	---
	HE	446	67
TOTALS	AG	28,001	6,361
	HE	13,581	3,903
	Combined	41,672	10,456

*Part of "discretionary" sample; not included in regional sample. Italicized institutions are included in S-114 regional sample.

+"1862 School"

++"1890 School"

NOTE: Data collected at University of Puerto Rico (AG and HE) were processed at Auburn University by Dr. John Dunkelberger, Department of Agricultural Economics & Rural Sociology. These figures are not represented in Table 1 or 1A and information concerning the population and sample returns may be obtained by contacting Professor Dunkelberger (see Appendix).

Table 1A. Selected Population and Sample Summaries for AG and HE Surveys

Population Description	Population Size	Sample Selected	Adjusted Sample	Final Returns* (%)
Regional AG	24,628	5,280	4,942	3,417 (69.4)
Regional HE	11,963	3,525	3,357	2,352 (70.1)
"Discretionary" AG	3,373	1,081	1,081	695 (64.3)
"Discretionary" HE	1,708	570	570	448 (78.6)
Regional 1862 AG	22,766	3,314	3,201	2,456 (76.7)
Regional 1862 HE	8,727	1,491	1,415	1,089 (77.0)
Regional 1890 AG	1,862	1,862	1,723	961 (55.8)
Regional 1890 HE	3,236	2,034	1,942	1,263 (65.0)
TOTAL: AG	28,001	6,361	6,005	4,112 (68.5)
TOTAL: HE	13,581	4,095	3,927	2,800 (71.3)
TOTAL: All SCHOOLS (AG & HE Pooled)	41,672	10,456	9,932	6,912 (69.6)

*based on "adjusted" sample size

NOTE: Figures for the University of Puerto Rico (AG and HE) are not included in this table. Contact Dr. John Dunkelberger, Department of Agricultural Economics and Rural Sociology, Auburn University (see Appendix) for additional information.

Frank, 1978). This latter sample was not part of the present endeavor, but was an independent project of the Texas Agricultural Experiment Station and sanctioned by the S-114 Technical Committee to facilitate the development of scales and coding procedures for the present study.

Cooperation from the selected institutions was good, facilitating the data collection described in more detail below. An exception was noted with a college in one school (Prairie View A&M Home Ec only) which delayed giving approval to their participation in the study until such a time that data collection was nearing its end. The Project Technical Committee decided that since data were collected on the original respondents during the summer months (a 2-3 month delay), this delay would not be too detrimental to the schedule.

III. DATA COLLECTION PROCEDURES AND RESPONSE RATES

ALLOCATION OF DATA COLLECTION RESPONSIBILITIES

Since the larger investigation, of which the present study is one phase, is a collaborative effort of researchers in several states, it was fiscally expedient to organize data collection responsibilities around this existing organizational structure. During the process of sample selection (Spring, 1977), the Technical Committee devised a standardized set of data collection procedures based on a common timetable of events (see Appendix E). Data collection responsibilities were allocated primarily on the basis of geographic proximity and the respective Project Leader's staff resources. Table 2 includes in the legend the data collection responsibilities for each S-114 Project Leader.

Data collection was conducted during the Spring of 1977 (March-June) according to the timetable in Appendix E.* Although it was impossible to coordinate all research activities with strict precision according to this pre-set schedule, the only noted deviations from it are noted below.

In most cases, U.S. mail was used to dispatch questionnaires to respondents. At some institutions (these were predominately schools with small enrollments), however, it was not possible to reach respondents directly via the U.S. mail service. In these instances, data collection was coordinated through a campus representative (an administrator) who facilitated the instruments reaching respondents; this was accomplished

---

*Due to a printer's delay, questionnaires were delayed in delivery to researchers. This resulted in approximately two weeks' delay in the proposed schedule as shown in Appendix E. Some additional adjustments in the timing of follow-up mailings occurred as sampled institutions on the "quarter system" and the "semester system" completed school terms on different dates.

generally through campus or departmental mail operations. We cannot deny that this variation in data collection procedures *may* have potentially biasing effects on returns, but it appears that there were no other feasible alternatives available to reach this sub-population.

An additional departure from the schedule occurred in data collection from respondents at the University of Tennessee. The student lists containing student information necessary for sample selection did not arrive until data collection was underway at all other schools in the regional sample. Since this institution possessed a rather large enrollment in both agriculture and home economics, it was decided to collect data later than planned at the outset rather than delete this institution from the sample altogether. Since returns sharply tailed-off when the term ended at the respective institutions, this decision probably retarded the potential *total* return rate from this institution. Thus, it appears that there was a trade-off in this decision: a potentially smaller (and potentially more biased) total return in exchange for a more complete sample frame coverage (Kish, 1965). It does not appear to have been costly in the between-strata return rates (see below).

The data collection timetable called for up to three mail attempts and one direct contact at gaining a response from a respondent included in the sample. The initial mail-out and first follow-up unit for each potential respondent contained a cover letter (Appendix F), a student questionnaire (Appendix B), and a pre-addressed, hand-stamped return envelope. The returns were addressed to a location determined by the Project Leader responsible for the institution in which the student was enrolled. This address was, in almost every case, that of the respec-

tive Project Leader. The only departures from this norm were in the case of a few institutions where students could not be reached directly via the U.S. Mail service.

Other undocumented departures from the pre-set timetable for data collection undoubtedly occurred. With the exception of questionnaires from respondents at the University of Tennessee, data collection was terminated as of June 20, 1977. At this time, researchers sent returns to a central location (Louisiana State University) for coding and processing.

RESPONSE RATES: AGRICULTURE STUDENT SAMPLE

For the agriculture student sample (abbreviated AG), general returns were about average for a mail questionnaire design (see Heberlein & Baumgartner, 1978). The original sample size and final processed returns by school stratum are shown in Table 2. An additional figure, the "adjusted" sample size, reflects a deletion of sample members who were either no longer in school, inappropriately classified as an agriculture student (sample frame errors), or who were nonreachable respondents (see Dillman, Carpenter, Christenson & Brooks, 1974). This table reflects only the *regional* AG student population sample and does not contain members of the "discretionary" sample (see Table 1A).

With total returns of 3,417 AG students, the adjusted return rate equals 69.4 percent. The unadjusted return rate is only slightly less (64.7%). It appears that most of the differences in between-school return rates can be attributed to "Land Grant" differences. Rates for 1890 institutions are generally lower than those for 1862 schools. Adducing figures from Table 2 shows that the total adjusted return rates

Table 2. Regional Sample Returns for Students in Colleges of Agriculture in the South

Researcher		Institution	Original Sample Size	Adjusted Sample Size	Final Returns	Raw %	Adjusted %
JD	** 1.	Alabama A & M Univ.	194	169	87	45%	51%
CRS	** 2.	Alcorn State Univ.	200	201	67	34%	33%
GWO	** 3.	Univ. of Arkansas at Pine Bluff	95	98	47	40%	48%
GWO	** 4.	Univ. of Arkansas at Fayetteville	104	104	79	76%	76%
JD	* 5.	Auburn Univ.	201	180	137	68%	76%
VAB	* 6.	Clemson Univ.	126	116	95	75%	82%
VAB	* 7.	Univ. of Florida	135	121	94	70%	78%
JD	** 8.	Florida A & M Univ.	150	107	71	47%	66%
JD	9.	Florida State Univ.	NA	---	---	---	---
VAB	**10.	Fort Valley State College	97	85	44	45%	52%
VAB	*11.	Univ. of Georgia	209	205	129	62%	63%
LC	*12.	Univ. of Kentucky	194	185	150	77%	81%
LC	**13.	Kentucky State Univ.	NA	---	---	---	---
CRS	**14.	Langston Univ.	16	16	11	69%	69%
GWO	*15.	Louisiana State Univ.	194	194	137	71%	71%
CRS	*16.	Mississippi State Univ.	174	173	131	75%	76%
JLR	**17.	North Carolina A & T	138	138	126	91%	91%
LWD	18.	Univ. of North Carolina at Greensboro	NA	---	---	---	---
LWD	*19.	North Carolina State at Raleigh	381	371	336	88%	91%
CRS	*20.	Oklahoma State Univ.	286	285	200	70%	70%
CLS	**21.	Prairie View A & M	80	85	61	76%	72%
LA	**22.	South Carolina State Univ.	NA	---	---	---	---
GWO	**23.	Southern Univ.	123	123	77	63%	63%
LC	*24.	Univ. of Tennessee	213	205	157	74%	77%
JD	**25	Tennessee State Univ.	149	176	72	48%	41%
AGC	*26.	Texas A & M Univ.	625	593	505	81%	85%
AGC	27.	Texas Tech Univ.	205	202	154	75%	76%
JD	**28.	Tuskeegee Institute	541	342	179	33%	52%
ORJ	*29.	Virginia Polytechnic and State Univ.	371	371	231	62%	62%
JLR	**30.	Virginia State Univ.	79	79	40	51%	51%
CAB	31.	Winthrop College	NA	---	---	---	---
		TOTALS	5280	4924	3417	64.7%	69.4%

Legend: AGC=Arthur G. Cosby, Texas A&M Univ. CAB=Carol A. Bocan, Winthrop College. CLS=Cecil L. Strickland, Prairie View A&M Univ. CRS=Carlton R. Sollie, Mississippi State Univ. GWO=George W. Ohlendorf, Louisiana State Univ. JD=John Dunkelburger, Auburn Univ. JLR=Joseph L. Richardson, N.C. State A&T Univ. LA=Leola Adams, S.C. State College. LC=Lee Coleman, Univ. of Kentucky. LWD=Larry W. Drabick, N.C. State Univ. at Raleigh. VAB=V.A. Boyd, Clemson Univ. (deceased)

*"1862" school
**"1890" school

the raw and adjusted return rates are 66.7 and 70.1 percent, respectively. The descrepancy between overall return rates of 1862 and 1890 is not as pronounced in the HE sample as was the case for AG returns. For 1862 HE strata, 77 percent of the adjusted sample questionnaires were processed as opposed to 65 percent of those from 1890 strata. This comprises a difference of about 12 percent whereas the same AG deficit was about 22 percent.

Between-strata return rates for the regional HE sample varied from a low of 39 percent (Langston University) to very highs of 95 (University of North Carolina at Greensboro) and 96 (Prairie View A&M University) percent. These nonresponse differences may be accounted for in sample weighting of the regional sample; however, the researcher should be wary when making estimates *within* a strata (or school) regarding the return rate for that strata. This observation also includes a note of caution as to the sampling strategy utilized for a particular school. For 1890 schools, 100 percent of the enrollment was taken (i.e., a total "sample") so that returns may *possibly* reflect a random return pattern but we have no way of knowing bias that may also exist. Obviously, estimates from UNC-Greensboro or Prairie View A&M University must be very accurate since ninety-five or more percent of their HE enrollment returned questionnaires. The same cannot be said of Langston University, however, where only 39 percent did so. For 1862 strata, where a 15 percent sample was taken, one should make some considerations of the fact that a *simple random sample* model (srs) is used when making estimates within that school.

for 1862 and 1890 schools are 76.7 and 54.5 percent, respectively.

The adjusted sample sizes for 1890 schools are more trustworthy estimates than the "original" ones, since the latter were *projected* estimates obtained from the National Association of State University and Land Grant Colleges (NASULGC). In most instances these NASULGC estimates were fairly accurate, but there are a few exceptions. Tuskeegee Institute, for example, was overestimated by about 50 percent. These adjusted estimates for the 1890 strata were used in the enumeration of the 1890 regional subpopulation, since these strata were oversampled to include 100 percent of their students. For the 1862 strata, most "adjustments" are five percent or less. Since relatively accurate information was available for 1862 strata regarding Spring, 1977 population enrollments, given the 0.15 sampling fraction for these schools, the 1862 subpopulation estimates were not adjusted. Hence, no corrections were made to the 1862 strata sampling frame (Kish, 1965).

Nonresponse to survey samples, particularly mail designs, is a common problem in the estimation of population parameters. Given the present return figures, it is likely that respondents and nonrespondents would tend to differ in means on particular variables of interest (Kish, 1965; Cochran, 1977). Suggestions for handling this problem with the present data will be developed below.

RESPONSE RATES: HOME ECONOMICS STUDENT SAMPLE

The home economics student sample (HE) return rates were similar to those in the AG sample. Table 3 displays the parallel information for the HE returns. From a population of about 12,000 students (see Table 1A), a stratified random sample of 3,525 students were "adjusted" by about 5 percent to 3,357. With final returns from 2,352 respondents,

Table 3. Regional Sample Returns for Students in Colleges of Home Economics in the South

Researcher		Institution	Original Sample Size	Adjusted Sample Size	Final Returns	Raw %	Adjusted %
JD	**1.	Alabama A&M Univ.	179	157	91	51%	58%
CRS	**2.	Alcorn State Univ.	95	91	76	80%	84%
GWO	**3.	Univ. of Arkansas at Pine Bluff	126	126	72	57%	57%
GWO	*4.	Univ. of Arkansas at Fayetteville	48	48	43	90%	90%
JD	*5.	Auburn Univ.	101	84	62	61%	74%
VAB	*6.	Clemson Univ.	NA	---	---	---	---
VAB	*7.	Univ. of Florida	NA	---	---	---	---
JD	**8.	Florida A&M Univ.	181	115	71	39%	62%
JD	9.	Florida State Univ.	113	96	73	65%	76%
VAB	**10.	Fort Valley State College	83	80	41	49%	51%
VAB	*11.	Univ. of Georgia	107	95	67	63%	71%
LC	*12.	Univ. of Kentucky	98	96	84	86%	87%
LC	**13.	Kentucky State Univ.	81	73	46	57%	63%
CRS	**14.	Langston Univ.	63	51	20	32%	39%
GWO	*15.	Louisiana State Univ.	95	94	80	84%	85%
CRS	*16.	Mississippi State Univ.	59	58	43	73%	74%
JLR	**17.	North Carolina A&T Univ.	263	263	181	69%	69%
LWD	18.	Univ. of North Carolina at Greensboro	113	110	105	93%	95%
LWD	*19.	North Carolina State at Raleigh	NA	---	---	---	---
CRS	*20.	Oklahoma State Univ.	177	175	116	66%	66%
CLS	**21.	Prairie View A&M Univ.	192	192	185	96%	96%
LA	**22.	South Carolina State Univ.	152	165	143	94%	87%
GWO	**23.	Southern Univ.	70	70	43	62%	62%
LC	*24.	Univ. of Tennessee	179	163	124	69%	76%
JD	**25.	Tennessee State Univ.	265	257	109	41%	42%
AGC	*26.	Texas A&M Univ.	NA	---	---	---	---
AGC	27.	Texas Tech. Univ.	210	205	160	76%	78%
JD	**28.	Tuskeegee Institute	154	172	81	53%	47%
ORJ	*29.	Virginia Polytechnic and State Univ.	124	124	81	65%	65%
JLR	**30.	Viginia State Univ.	130	130	104	80%	80%
CAB	31.	Winthrop College	67	67	51	76%	76%
		TOTALS	3,525	3,357	2,352	66.7%	70.1%

Legend: AGC = Arthur G. Cosby, Texas A&M Univ. CAB = Carol A. Bocan, Winthrop College. CLS = Cecil L. Strickland, Prairie View A&M Univ. CRS = Carlton R. Sollie, Mississippi State Univ. GWO = George W. Ohlendorf, Louisiana State Univ. JD = John Dunkelburger, Auburn Univ. JLR = Joseph L. Richardson, N.C. State A&T Univ. LA = Leola Adams, S.C. State College. LC = Lee Coleman, Univ. of Kentucky. LWD = Larry W. Drabick, N.C. State Univ. at Raleigh. VAB = V.A. Boyd, Clemson Univ. (deceased)

*1862 school

*1890 school

IV. DATA FILE SPECIFICATIONS AND USAGE

This section briefly overviews the organization of the data files available in S-114/Objective 3, some suggestions for their usage with computer statistical software, as well as some general remarks and guidelines concerning sample "weighting" and variability.

DATA FILE ORGANIZATION AND COMPUTER SOFTWARE USAGE

The S-114/3 data set consists of ten(10) data files residing on one (1) 2400 ft. reel of magnetic tape.* These files contain both the AG and HE data, segmented into specific subsets of data for convenience in file processing and maintenance. Table 4 lists each file and a brief description of its contents. This manual is concerned primarily with the regional AG and HE samples and their file locations and status. For example, if the user desires to access the Regional AG sample, then file nos. 1 and 3 should be "merged" (or pooled) and only schools in this particular sample should be "selected" for inclusion in the analysis. Table 1 - 3 document these schools and are useful for this "selection" purpose.

This selection and data file maintenance is greatly facilitated by the use of a fully documented, file-saving statistical analysis "package" program, such as SAS (Barr & Goodnight, 1972), BMDP (Dixon & Brown, 1977), or SPSS (Nie, *et al.*, 1975). This data set is currently maintained on the UNIVAC system at Mississippi State University in SPSS "system" files; hence, examples are from this software package.

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*Processed at Louisiana State University; contact Dr. George W. Ohlendorf, Department of Rural Sociology, Louisiana State University, Baton Rouge, Louisiana for details on technical specifications.

Table 4. S-114/3 File Structure: AG and HE Data Sets

File No.	File Contents			
	ID Nos.	N	Code	Schools
1	--- Regional 1862 AG Schools (see Table 2) ---			
	02088-02166	79	03	University of Arkansas, Fayetteville
	03726-03862	137	05	Auburn University
	00210-00304	95	06	Clemson University
	00853-00946	94	09	University of Florida
	00724-00852	129	13	University of Georgia
	03508-03657	150	14	University of Kentucky
	00948-01084	137	18	Louisiana State University
	00592-00722	131	20	Mississippi State University
	02853-03188	336	24	North Carolina State University
	02168-02367	200	25	Oklahoma State University
	02429-02585	157	29	University of Tennessee
	01313-01816 03863	504 1	31	Texas A&M University
	01817-01966 03867-03870	150 4	32	Texas Tech University
	01085-01312 03864-03866	228 3	34	Virginia Polytechnic Institute and State University
2	--- AG "Discretionary" Data: New Mexico State University and University of Delaware Only ---			
	00305-00541	237	21	New Mexico State University
	00001-00091	91	07	University of Delaware
3	--- Regional 1890 AG Schools (see Table 2) ---			
	02766-02852	87	01	Alabama A&M University
	00143-00209	67	02	Alcorn State University
	00545-00591	47	04	University of Arkansas at Pine Bluff
	03332-03391	60	08	Delaware State College

(continued)

Table 4. (continued)

File No.	File Contents			
	ID Nos.	N	Code	Schools
3 (cont.)	03189-03259	71	10	Florida A&M University
	00103-00142 00542-00544 00947	40 3 1	12	Fort Valley State College
	0092-00102	11	16	Langston University
	01967-02010	44	17	Lincoln University
	03658-03687	30	19	University of Maryland, Eastern Shore
	00392-03507 03871-03880	116 10	22	North Carolina A&T State University
	02368-02428	61	26	Prairie View A&M University
	02011-02087	77	28	Southern University
	03260-03331	72	30	Tennessee State University
	02586-02764	179	33	Tuskegee Institute
	03688-03725 03881-03882	38 2	35	Virginia State College
4	--- AG "Discretionary" Data: University of Western Kentucky and Murray State University Only ---			
	03883-03999	117	38	Murray State University
	04000-04115	116	39	Western Kentucky University
5	--- AG University of Puerto Rico Only ---			
	PA001-PA218	218	37	University of Puerto Rico
6	--- Regional 1862 HE Schools (see Table 3) ---			
	70419-70461	43	03	University of Arkansas, Fayetteville
	70190-70251	62	05	Auburn University
	70346-70418	73	11	Florida State University
	70462-70528	67	13	University of Georgia
	70775-70894 71981	121	14	University of Kentucky

(continued)

Table 4. (continued)

File No.	File Contents			
	ID Nos.	N	Code	Schools
6 (cont.)	71019-71098	80	18	Louisiana State University
	70303-70345	43	20	Mississippi State University
	71214-71318	105	23	University of North Carolina at Greensboro
	71099-71213 71400	116	25	Oklahoma State University
	70895-71018	124	29	University of Tennessee
	70615-70774	160	32	Texas Tech University
	71319-71399	81	34	Virginia Polytechnic Institute and State University
	70252-70302	51	36	Winthrop College
7	--- HE "Discretionary" Data: New Mexico State University and University of Delaware Only ---			
	70144-70189	46	21	New Mexico State University
	70529-70614	87	07	University of Delaware
8	--- Regional 1890 HE Schools (see Table 3) ---			
	71402-71492	91	01	Alabama A&M University
	71493-71568	76	02	Alcorn State University
	71615-71686	72	04	University of Arkansas at Pine Bluff
	71768-71795	28	08	Delaware State College
	72204-72274	71	10	Florida A&M University
	71982-72022	41	12	Fort Valley State College
	71569-71614	46	15	Kentucky State University
	72379-72398	20	16	Langston University
	72275-72312	38	17	Lincoln Universtiy
	72313-72335	23	19	University of Maryland, Eastern Shore
	72023-72203	181	22	North Carolina A&T State University

(continued)

Table 4. (continued)

File No.	File Contents			
	ID Nos.	N	Code	Schools
8 (cont.)	71796-71980	185	26	Prairie View A&M University
	70001-70143	143	27	South Carolina State College
	72336-72378	43	28	Southern University
	72399-72507	109	30	Tennessee State University
	71687-71767	81	33	Tuskegee Institute
	72508-72611	104	45	Virginia State College
9	--- HE "Discretionary" Data: University of Western Kentucky and Murray State Universtiy Only ---			
	72612-72727	116	38	Murray State University
	72728-72837	110	39	Western Kentucky University
10	--- HE University of Puerto Rico Only ---			
	PH001-PH289	289	37	University of Puerto Rico

NOTE: N = number of R's from school; Code = school code (see Vol. II)

Vol. II of this manual includes codebook documentation and univariate frequencies for the Regional AG and HE (separately) samples. In accessing the data from the files, however, the handling of "missing data" requires some caution. Data values that were classified as "NO RESPONSE" (or otherwise uncodeable - see Part III) are recorded in the data files as *blanks*. In the codebook portion, these codes (i.e., "BLANKS") appear as "9999" and are appropriately labeled. We recommend that the user follow the same tact in generating documented files for use with package software if at all possible. This step insures compatibility with the present documentation.

This recoding stage may be accomplished in SPSS via the following statement (see Nie, *et al.*, 1975):

```
RECØDE      V001 to V165 (BLANK = 9999)
```

In addition, variable number 83 (V083 in Codebook) is R's self-reported grade-point average in college. It was coded without the decimal point (e.g., "48" instead of "4.8"). The following SPSS statements will compute the new variable COLGPA to use in place of V083:

```
CØMPUTE         CØLGPA = V083/10
ASSIGN MISSING  CØLGPA(9999)
```

SAMPLE WEIGHTING AND VARIABILITY

In estimating the gain (or loss) in precision by using a particular sampling plan over a *simple random sample* (srs) design, a "design effect," or DEFF, is often computed (Kish, 1965). Since stratification *usually* leads to a net gain in precision, or smaller sampling errors, DEFF equals the variation in the estimates of the stratified sample (str) divided by the variation in the estimates that would have been obtained in a *srs* of the same size (Cochran, 1977). The DEFF is also often used to "adjust"

standard errors obtained from computer software routines that assume a *srs* design to reflect the "true" standard errors of the particular design.

Since the S-114/3 sampling plan is stratified by school, gains in precision will be greatest for those variables most closely related to between-school differences. On the other hand, since optimal allocation was not integral to the design, in order to generate enough respondents for within-school estimates, this artifact may reduce the precision actually obtained (see Cochran, 1977: 101-3).

With this in mind, crude DEFF ratios were computed and approximate 0.90 (AG sample) and 0.92 (HE sample) for means and 1.2 (AG and HE sample) for proportions. As is apparent, these are not very different from a DEFF of 1.0, an indication that *srs* standard errors may serve as practical approximations to the actual sampling errors in the present sample. These figures, however, are only rule-of-thumb estimates. More elaborate treatments may be performed by the user consulting standard references or texts on sampling (see Lazerwitz,1968; Kish, 1965; Cochran, 1977). These figures are only applicable to the Regional AG and HE samples.

If the user desires to "weight" either Regional sample to adjust for differential sampling and/or nonresponse rates within school strata, several precautions should be noted. Most statistical software assumes *srs* designs in analyzing data. While this *may* not be detrimental in the present case when standard errors of univariate statistics are involved (see above), it may very well indeed be hazardous in bivariate or multivariate analyses. Smith (1976) details many of these types of problems.

In an attempt to approximate a representative sample of a regional AG and HE population, weights were constructed to account for: (1) differential sampling rates across 1862 and 1890 strata, and, (2) differential

nonresponse across strata. Usually, these adjustments are accomplished via the usage of two-stage "inverses" of the sampling fractions and response rates. However, this often unnecessarily inflates the sample size and can play havoc with the level of confidence associated with statistical hypothesis tests (Smith, 1976). Weights shown in Table 5 for the AG sample and Table 6 for the HE sample were computed via the following formula:

$$w^*_h = \left[\left(\frac{N_h \, n}{N \, n_h} \right) \left(\frac{1}{n/n_h} \right) \right]$$

where:

h = stratum or school
N_h = stratum population of the 1862 *regional* school
n_h = stratum sample size drawn (see Table 1)
N = total population size of 1862 regional schools (N = 22,766)
n = total 1862 regional sample size of returns (n = 2,535)

These weights will adjust for stratification and nonresponse to the entire instrument (not specific items) and will maintain the sample size originally obtained in the original unweighted version (see Tables 2 and 3). For the complexities encountered with other statistics, such as regression coefficients, see Cochran (1977) or Smith (1976).

The samples may be "weighted" in SPSS through the use of a few statements like the following:

```
COMPUTE   WT=V0J8
RECODE    WT(1=0.272) (2=0.420) (3=....etc.)
WEIGHT    WT
```

If done properly, the "weighted" sample size should be equal to the original unweighted size. (Remember, the "weighted" school stratum sizes will be *different*, since this "compression" and "expansion" is what the weighting procedure does to the total sample).

Table 5. Stratum-Weights for Agriculture Student (AG) Sample: Regional Strata*

School or Stratum	Stratum Population	Sample Size	Final Returns	Proportion	Stratum Weight
Alabama A&M	169	169	87	.51	0.272
Alcorn State	201	201	67	.33	0.420
U. Arkansas-Pine Bluff	98	98	47	.48	0.292
U. Arkansas-Fayetteville	691	104	79	.76	1.226
Auburn	1340	180	137	.76	1.371
Clemson	839	116	95	.82	1.238
U. Florida	895	121	94	.78	1.334
Florida A&M	107	107	71	.66	0.211
Fort Valley State	85	85	44	.52	0.271
U. Georgia	1398	205	129	.63	1.519
U. Kentucky	1295	185	150	.81	1.210
Langston	16	16	11	.69	0.204
Louisiana State	1294	194	137	.71	1.324
Mississippi State	1161	173	131	.76	1.242
North Carolina A&T	138	138	126	.91	0.153
North Carolina State	2538	371	336	.91	1.058
Oklahoma State	1905	285	200	.70	1.335
Prairie View A&M	85	85	61	.72	0.195
Southern	123	123	77	.63	0.224
U. Tennessee	1422	205	157	.77	1.269
Tennessee State	176	176	72	.41	0.343
Texas A&M	4151	593	505	.85	1.152
Texas Tech	1364	202	154	.76	1.241
Tuskeegee Institute	342	342	179	.52	0.268
Virginia Polytechnic	2473	371	231	.62	1.500
Virginia State	79	79	40	.51	0.277
TOTAL:	24,385	4,924	3,417		

*Estimates computed using "adjusted" sample size (see text); weights are computed to adjust for disproportionate strata sampling fractions and strata nonresponse.

Table 6. Stratum-Weights for Home Economics Student (HE) Sample: Regional Strata*

School or Stratum	Stratum Population	Sample Size	Final Returns	Proportion	Stratum Weight
Alabama A&M	157	157	91	.58	0.342
Alcorn State	91	91	76	.84	0.237
U. Arkansas-Pine Bluff	126	126	72	.57	0.347
U. Arkansas-Fayetteville	322	48	43	.90	1.484
Auburn	671	84	62	.74	2.144
Florida A&M	115	115	71	.62	0.321
Florida State	751	96	73	.76	2.038
Fort Valley State	80	80	41	.51	0.387
U. Georgia	707	95	67	.71	2.091
U. Kentucky	652	96	84	.87	1.538
Kentucky State	73	73	46	.63	0.314
Langston	51	51	20	.39	0.505
Louisiana State	635	94	80	.85	1.573
Mississippi State	390	58	43	.74	1.797
North Carolina A&T	263	263	181	.69	0.288
U. N.C.-Greensboro	756	110	105	.95	1.427
Oklahoma State	1178	175	116	.66	2.012
Prairie View A&M	192	192	185	.96	0.206
South Carolina State	165	165	143	.87	0.229
Southern	70	70	43	.62	0.323
U. Tennessee	1193	163	124	.76	1.906
Tennessee State	257	257	109	.42	0.467
Texas Tech	1407	205	160	.78	1.735
Tuskeegee Institute	172	172	81	.47	0.421
Virginia Polytechnic	827	124	81	.65	2.023
Virginia State	130	130	104	.80	0.248
Winthrop	446	67	51	.76	1.733
TOTALS:	11,871	3,357	2,352		

*Estimates computed using "adjusted" sample size (see text); weights are computed to adjust for disproportionate strata sampling fractions and strata nonresponse.

References

Armstrong, David L. (ed.)
1977 Impact of Enrollments and Study Body Composition on Academic Program, Design, and Delivery. East Lansing: Michigan State University.

Barr, Anthony J. and James H. Goodnight
1972 A User's Guide to the Statistical Analysis System. Raleigh, North Carolina: North Carolina State University.

Blau, Peter M. and Otis D. Duncan
1967 The American Occupational Structure. New York: Wiley.

Cochran, William G.
1977 Sampling Techniques, Third Edition. New York: Wiley.

Cosby, Arthur G. and Lianne Frank
1978 "A Prestige Scale for Agricultural Occupations," in Rural Sociology in the South: 1978. Edward McLean (ed.). Proceedings of the Rural Sociology Section, Southern Association of Agricultural Scientists, Atlanta, February.

Dixon, W. J. and M. B. Brown (eds.)
1977 BMDP-77: Biomedical Computer Programs, P-Series. Berkeley: University of California Press.

Dragastin, S. E. and G. M. Elder (eds.)
1975 Adolescense in the Life Cycle: Psychological Change and Social Context. Washington, D. C.: Hemisphere.

Dillman, Don, Edwin Carpenter, James Christianson, and Ralph Brooks
1974 "Increasing mail questionnaire response: A four state comparison." American Sociological Review 39: 744-756.

Ginzberg, Eli et al.
1951 Occupational choice: an approach to a general theory. New York: Columbia University Press.

Heberlein, Thomas A. and Robert Baumgartner
1978 "Factors affecting response rates to mailed questionnaries: A quantitative analysis of the published literature." American Sociological Review 43 (4): 447-462.

Kish, Leslie
1965 Survey sampling. New York: Wiley.

Lazerwitz, Bernard
1968 "Sampling Theory and Procedures," Pp. 278-328 in Hubert M. Blalock, Jr. and Ann B. Blalock (eds.), Methodology in Social Research. New York: McGraw-Hill.

Molnar, Joseph, John Dunkelberger, and Freddie Richards
1978 1890 and 1862 Comparisons: A Summary Tabulation Prepared for the Deans and Directors of Resident Instruction in Agriculture at Land-Grant Institutions in the Southern Region. Auburn: Agricultural Experiment Station, Auburn University, July.

Nie, N. H., C. H. Hull, J. G. Jenkins, K. Steinbrenner, and D. H. Hunt
1975 SPSS: Statistical Package for the Social Sciences. New York: McGraw-Hill.

Robinson, John P., Robert Athanasiou, and Kendra B. Head
1969 Measures of Occupational Attitudes and Occupational Characteristics. Ann Arbor: Institute for Social Research.

Sewell, William H., Archibald O. Haller, and Alejandro Portes
1969 The educational and early occupational attainment process. American Sociological Review 34 (February): 82-92.

Smith, Kent W.
1976 "Analyzing disproportionately stratified samples with computerized statistical packages." Sociological Methods & Research 5 (2): 207-230.

Super, Donald E.
1957 The Psychology of Careers: an Introduction to Vocational Development. New York: Harper & Row.

U.S. Bureau of the Census
1963 The Current Population Survey: A Report on Methodology. Technical Paper No. 7. Washington, D.C.: U.S. Government Printing Office.

APPENDIX A

S-114 Technical Committee Members

Appendix A

S-114 TECHNICAL COMMITTEE MEMBERS

Defining and Achieving Life Goals: A Process
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+++Chairman
++Vice Chairman
+Secretary

Date: April 10, 1979

APPENDIX B

Student Questionnaire

REGIONAL STUDY OF AGRICULTURE
AND HOME ECONOMICS STUDENTS

INTRODUCTION

You have been randomly selected to participate in a study of students at universities in the South. This study is being conducted by researchers from agricultural experiment stations, and is particularly concerned with the backgrounds and career orientations of students enrolled in agriculture and home economics.

The success of the project is dependent upon your voluntary cooperation. You do not have to answer any or all of the questions. However, your cooperation is earnestly solicited. We believe that the information collected in this study will be of great benefit to students like yourself in the future.

Your name and the address of someone who will always know where you may be contacted are requested on the questionnaire. This information is needed so that you can be contacted again in several years for another phase of the study. Information supplied by you and your fellow students will be kept strictly CONFIDENTIAL. No information will be released in such a way that individual students could be identified.

PLEASE READ CAREFULLY AND COMPLETE ALL THE QUESTIONS ON THE FORM TO THE BEST OF YOUR ABILITY. IF YOU HAVE ANY COMMENTS WHICH MIGHT HELP CLARIFY YOUR ANSWERS, PLEASE FEEL FREE TO WRITE THEM IN THE LEFT-HAND MARGIN OF THE QUESTIONNAIRE. PLEASE TAKE A FEW MINUTES NOW, BEFORE YOU FORGET, TO COMPLETE YOUR QUESTIONNAIRE. RETURN IT WITHIN 5 DAYS IN THE POSTAGE-PAID ENVELOPE ENCLOSED. THANK YOU.

YOUR NAME _____
Last Name First Name Middle Name

Please give the name and address of someone who would always know how you may be contacted.

Name: _____

Address: _____
(Street, Box or RFD)

_____
(City) (State) (Zip)

Phone No. (if known): _____
(Area Code) (Number)

Relationship of this person to you: _____

*PLEASE PLACE AN "x" IN ALL BOXES EXCEPT WHERE INDICATED.

ID_____(1-5)

CARD 1 (6)

BACKGROUND DATA

1. Sex: Male ☐ 1 Female: ☐ 2 (7)

2. How do you describe yourself?

American Indian	☐ 1	Other Latin-American origin	☐ 5	(8)
Black or Afro-American or Negro	☐ 2	Oriental or Asian-American	☐ 6	
Mexican-American or Chicano	☐ 3	White or Anglo-American	☐ 7	
Puerto Rican	☐ 4	Other (specify) _____	☐ 8	

3. Age:_____years at last birthday (9-10)

4. Country of citizenship: U.S.A. ☐ 1
Other (specify) _____ ☐ 2 (11)

5. Home State:_____ (12-13)

6. Name of university presently attending:_____ (14-15)

7. Major(s) or concentration(s):_____ (16-17)

_____ (18-19)

8. College classification: (20)

Freshman	☐ 1	Senior	☐ 4
Sophomore	☐ 2	Graduate student	☐ 5
Junior	☐ 3	Other	☐ 6

9. Marital Status: (21)

Single	☐ 1	Divorced	☐ 4
Married	☐ 2	Widowed	☐ 5
Separated	☐ 3		

10a. Please indicate the kind of place you have lived most of your life (or for the longest period in your life): (22)

A large metropolitan city (over 500,000 in population)	☐ 6
A medium-sized city (50,000 to 500,000 in population)	☐ 5
A smaller city (10,000 to 50,000 in population)	☐ 4
A town or village (under 10,000 in population)	☐ 3
In the country, outside of a city or village	☐ 2
In the country and on a farm or ranch, outside of a city or village	☐ 1

b. If you lived longest in a place which had less than 50,000 in population, how far was it from a large or medium-sized city? _____miles. (23-24)

PARENTAL INFORMATION

11. Please indicate the kind of place in which your parents were raised. (25)(26)

	Father	Mother
A large metropolitan city (over 500,000 in population)	☐ 6	☐ 6
A medium-sized city (50,000 to 500,000 in population)	☐ 5	☐ 5
A smaller city (10,000 to 50,000 in population)	☐ 4	☐ 4
A town or village (under 10,000 in population)	☐ 3	☐ 3
In the country, outside of a city or village	☐ 2	☐ 2
In the country and on a farm or ranch, outside of a city or village.	☐ 1	☐ 1

12a. Are your parents presently living on a farm or ranch? (27)

- Yes, one they own ☐ 1
- Yes, one they lease or rent ☐ 2
- Yes, one they tenant-farm ☐ 3
- No, but they own, rent, or lease one ☐ 4
- No ☐ 5

b. If your parents own, lease, rent, or tenant-farm a farm or ranch, approximately what part of their total income is from agricultural production? (28)

- Primary source of income (over 1/2) ☐ 1
- Secondary source of income (less than 1/2) ☐ 2
- Just live there but get no income ☐ 3

13a. What is your father's current occupation? Be specific and detailed. If disabled, retired, or deceased, please indicate what his occupation was most of his life. If farmer or rancher indicate his major agricultural product, how many acres he owns, and how many acres he operates. (29-38)

_____

_____

_____

b. Is his current employment status: (39)

Full-time	☐ 1	Disabled	☐ 5
Part-time	☐ 2	Retired	☐ 6
Self-employed	☐ 3	Deceased	☐ 7
Unemployed	☐ 4		

16-a. What is your mother's current occupation? Be specific and detailed. (40-49)
If disabled, retired, or deceased, please indicate what her occupation was most of her life. If farmer or rancher, indicate her major agricultural product, how many acres she owns, and how many acres she operates. If housewife, so indicate.

_____

b. Is her current employment status: (50)

Housewife	☐ 1	Unemployed	☐ 5
Full-time	☐ 2	Disabled	☐ 6
Part-time	☐ 3	Retired	☐ 7
Self-employed	☐ 4	Deceased	☐ 8

17. Approximately what is your parents' average yearly income? (51)

Less than $5000	☐ 1	25,000 to 49,999	☐ 6
5,000 to 9,999	☐ 2	50,000 to 74,999	☐ 7
10,000 to 14,999	☐ 3	75,000 to 99,999	☐ 8
15,000 to 19,999	☐ 4	Over 100,000	☐ 9
20,000 to 24,999	☐ 5		

18. What is the highest school level completed by your parents? (52)(53)

	Father	Mother
Less than 9th grade	☐ 1	☐ 1
Some high school but didn't graduate	☐ 2	☐ 2
Vocational training but didn't graduate from high school	☐ 3	☐ 3
Graduated from high school or high school equivalent (e.g., GED)	☐ 4	☐ 4
Vocational training after high school graduation	☐ 5	☐ 5
Some college but didn't graduate (including junior college)	☐ 6	☐ 6
College graduate (bachelors degree)	☐ 7	☐ 7
Graduate work (beyond bachelors degree)	☐ 8	☐ 8
Don't know	☐ 9	☐ 9

19. What is your own political preference and that of your parents:

	Conservative 1	Somewhat Conservative 2	Moderate 3	Somewhat Liberal 4	Liberal 5	Don't Know 9	
Yourself	☐	☐	☐	☐	☐	☐	(54)
Father	☐	☐	☐	☐	☐	☐	(55)
Mother	☐	☐	☐	☐	☐	☐	(56)

20. How many older brothers [___] and sisters [___] do you have? (57)(58)

21. How many younger brothers [___] and sisters [___] do you have? (59)(60)

HIGH SCHOOL DATA

22. From what type of high school did you graduate? (61)

- Public ☐ 1
- Private (religious) ☐ 2
- Private (non-religious) ☐ 3
- Other (e.g., G.E.D., etc.) ☐ 4

23. How many students were in your graduating class in high school? (62)

Less than 25	☐ 1	150 to 199	☐ 6
25 to 49	☐ 2	200 to 399	☐ 7
50 to 74	☐ 3	400 to 599	☐ 8
75 to 99	☐ 4	600 or more	☐ 9
100 to 149	☐ 5		

24. Which of the following is closest to your overall high school grade point average? (63)

A ☐ 4 B ☐ 3 C ☐ 2 D ☐ 1 F ☐ 0

25.a. Were agriculture courses offered in your high school (64)

Yes ☐ 1 No ☐ 2 Don't know ☐ 3

b. Did you take any agriculture courses in high school? (65)

Yes ☐ 1 No ☐ 2

26.a. Were home economics courses offered in your high school? (66)

Yes ☐ 1 No ☐ 2 Don't know ☐ 3

b. Did you take any home economics courses in high school? (67)

Yes ☐ 1 No ☐ 2

27.a. Did one course in high school, more than any other course, influence your decision to choose an agricultural or home economics major in college? (68)

Yes ☐ 1 No ☐ 2

b. If "yes", was this course in: (69)

Agriculture	☐ 1	Physical science	☐ 4
Home economics	☐ 2	Other (specify) _____	☐ 5
Biological science	☐ 3		

_____

ID_____(1-5)

CARD 2 (6)

28. While enrolled in high school, did you participate in any of the following type of activities?

	Participated as a leader or officer 3	Participated 2	Did not participate 1	
Athletic teams, letterman's club	☐	☐	☐	(7)
Intramurals, sports club	☐	☐	☐	(8)
Cheerleaders, pep club, drill team	☐	☐	☐	(9)
Debating, drama, band, chorus	☐	☐	☐	(10)
Hobby clubs such as photography, model building, hot rod, electronics, crafts	☐	☐	☐	(11)
Honorary clubs such as Beta Club or National Honor Society	☐	☐	☐	(12)
School newspaper, magazine, yearbook annual	☐	☐	☐	(13)
School subject matter clubs such as science, history, language, business, art	☐	☐	☐	(14)
Student council, student government political club	☐	☐	☐	(15)
4-H	☐	☐	☐	(16)
FFA	☐	☐	☐	(17)
FHA	☐	☐	☐	(18)
Other vocational clubs such as Future Teachers, DECA, OEA, FBEA, HERO, or VICA	☐	☐	☐	(19)

WORK EXPERIENCES

29. Please indicate the kinds of work experiences you have had by giving a response for each work experience.

	Yes 1	No 2	
Farm or ranch work on home farm	☐	☐	(20)
Farm or ranch work elsewhere as a hired employee	☐	☐	(21)
Other agriculture-related work	☐	☐	(22)
Home economics-related work as a hired employee	☐	☐	(23)
Other work experiences	☐	☐	(24)

COLLEGE EXPERIENCE

30. Did you attend another university or college before you entered your present university? (25)

- No ☐ 1
- Yes, a 2-year college ☐ 2
- Yes, a 4-year college ☐ 3
- Other (specify)_____ ☐ 4

31. How influential have each of the following people been in helping you to choose your college major?

	Very Influential 3	Some Influence 2	No Influence 1	
Mother	☐	☐	☐	(26)
Father	☐	☐	☐	(27)
Brother	☐	☐	☐	(28)
Sister	☐	☐	☐	(29)
Other relative	☐	☐	☐	(30)
High school friend	☐	☐	☐	(31)
High school counselor	☐	☐	☐	(32)
County extension agent	☐	☐	☐	(33)
Voc. ag. teacher	☐	☐	☐	(34)
Home economics teacher	☐	☐	☐	(35)
Other teacher or principal	☐	☐	☐	(36)
College friend	☐	☐	☐	(37)
College teacher or advisor	☐	☐	☐	(38)
Former student	☐	☐	☐	(39)
Dean or Associate Dean of Ag. or Home Economics	☐	☐	☐	(40)
Veterinarian	☐	☐	☐	(41)
Clergyman	☐	☐	☐	(42)

32. a. What is your overall college GPA? (for example, 2.4) _____ (43-44)

If first semester student, please indicate here ☐

b. How is your GPA computed? 3 pt. scale ☐ 4 pt. scale ☐ (45)

33. a. Since first enrolling in college, have you ever changed your major or concentration? Yes ☐ 1 No ☐ 2 (46)

b. If "yes", was your most recent previous major or concentration also in agriculture or home economics? (47)

Yes ☐ 1 No ☐ 2

34. Please indicate how important the following things were in choosing your present major.

	Very Importance 3	Some Importance 2	No Importance 1	
Scholarships and/or financial assistance	☐	☐	☐	(48)
To prepare for a career	☐	☐	☐	(49)
To help others	☐	☐	☐	(50)
A preference of country life to city life	☐	☐	☐	(51)
Successful prior experiences in agri.	☐	☐	☐	(52)
Successful prior experiences in home economics	☐	☐	☐	(53)
My friends were in this major	☐	☐	☐	(54)
My family thought this would be best	☐	☐	☐	(55)
High school teacher or counselor suggested it	☐	☐	☐	(56)
College teacher or advisor suggested it	☐	☐	☐	(57)
Had a course related to this in high school	☐	☐	☐	(58)
Had a course related to this in college	☐	☐	☐	(59)
Chance to make better grades	☐	☐	☐	(60)
It would insure a good income	☐	☐	☐	(61)
Other (please specify)_____	☐	☐	☐	(62)

35. Please indicate to which of the following agricultural or home economics organizations you belong and if you were a leader or officer in those organizations.

	Memberships		Leader or Officer		
	Yes 1	No 2	Yes 1	No 2	
Departmental Clubs	☐	☐	☐	☐	(63)(64)
Judging teams	☐	☐	☐	☐	(65)(66)
Honors fraternities/sororities	☐	☐	☐	☐	(67)(68)
College 4-H/FFA/FHA	☐	☐	☐	☐	(69)(70)
Student agriculture or home economics council	☐	☐	☐	☐	(71)(72)
Social fraternities/sororities	☐	☐	☐	☐	(73)(74)
Professional societies/associations	☐	☐	☐	☐	(75)(76)

ID_____ (1-5)

CARD 3 (6)

36. Please indicate which of the following sources have contributed to the cost of your college education, including living expenses.

	Yes 1	No 2	
Scholarships	☐	☐	(7)
Student loans or grants	☐	☐	(8)
Own savings	☐	☐	(9)
Part-time work while at college	☐	☐	(10)
Parents	☐	☐	(11)
Veterans benefits	☐	☐	(12)
Spouse	☐	☐	(13)
Other relative or friends	☐	☐	(14)
Summer jobs	☐	☐	(15)
Other (specify) _____	☐	☐	(16)

GOALS

37. If you could have as much formal education as desired, which one of the following would you do? (17)

- Quit school before bachelors degree ☐ 1
- Go to a vocational training school or business school ☐ 2
- Complete work for a bachelors degree ☐ 3
- Complete a program for a masters degree ☐ 4
- Complete a program for a professional degree (vet., law, etc.) ☐ 5
- Complete a program for a doctoral degree ☐ 6

38. Which one of the following do you think you really will do about your formal education? (18)

- Quit school before bachelors degree ☐ 1
- Go to a vocational training school or business school ☐ 2
- Complete work for a bachelors degree ☐ 3
- Complete a program for a masters degree ☐ 4
- Complete a program for a professional degree (vet., law, etc.) ☐ 5
- Complete a program for a doctoral degree ☐ 6

39. If you expect to do graduate work after you have your bachelors degree, please answer the following:

a. Do you expect to remain in an agricultural or home economics related concentration? (19)
Yes ☐ 1 No ☐ 2

b. Do you expect to remain at your present university? (20)
Yes ☐ 1 No ☐ 2

40. If you were completely free to choose any job, what would you desire most as a lifetime job? Please give the exact job. _____ (21-30)

_____

41. Sometimes we are not always able to do what we want most. What kind of job do you really expect to have most of your life? Please give the exact job. _____ (31-40)

_____

42. Do you think you might eventually own a farm or ranch? (41)

- ☐ 3 Yes, own alone
- ☐ 2 Yes, own with others
- ☐ 1 No

43. Do you expect to inherit a farm or ranch someday? (42)

- ☐ 4 Yes, definitely expect to
- ☐ 3 Some possibility of it
- ☐ 2 No, definitely won't
- ☐ 1 Already inherited one (or spouse did)

44. What do you anticipate your income will be in your first full-time job after completing your formal education? (43)

Less than $5,000	☐ 1	12,500 to 14,999	☐ 5
5,000 to 7,499	☐ 2	15,000 to 17,499	☐ 6
7,500 to 9,999	☐ 3	17,500 to 19,999	☐ 7
10,000 to 12,499	☐ 4	20,000 or above	☐ 8

45. We are interested in the kind of community you would prefer to live in once you complete your education. If you could live in any size community you wanted, which <u>one</u> of the following would you like <u>best</u>? (44)

- ☐ 6 A large metropolitan city (over 500,000 in population)
- ☐ 5 A medium-sized city (50,000 to 500,000 in population)
- ☐ 4 A smaller city (10,000 to 50,000 in population)
- ☐ 3 A town or village (under 10,000 in population)
- ☐ 2 In the country, outside a city or village
- ☐ 1 In the country and on a farm or ranch, outside of a city or village

46. If you chose a place of less than 50,000 in population, how far would it be from a large or medium-sized city? (45)

- ☐ 1 Within 30 miles
- ☐ 2 Farther away than 30 miles
- ☐ 3 Doesn't matter

(10)

ATTITUDES

Beside each of the statements listed below, please indicate whether you strongly agree, agree, disagree, strongly disagree, or are undecided.

	Strongly Agree 5	Agree 4	Undecided 3	Disagree 2	Strongly Disagree 1	
47. Women in college are more concerned with getting a husband than with preparing for a career.	☐	☐	☐	☐	☐	(46)
48. The husband and wife should be equal partners in the marriage.	☐	☐	☐	☐	☐	(47)
49. It is alright for a woman to work but her real fulfillment in life comes with motherhood.	☐	☐	☐	☐	☐	(48)
50. A woman who does the same work as a man should receive the same pay.	☐	☐	☐	☐	☐	(49)
51. I would feel uncomfortable if my supervisor at work were a woman.	☐	☐	☐	☐	☐	(50)
52. Women are capable of performing as well as men at work outside the home.	☐	☐	☐	☐	☐	(51)
53. It's alright for women to work full-time even though their children are in school.	☐	☐	☐	☐	☐	(52)
54. Most agricultural occupations are unsuited to women.	☐	☐	☐	☐	☐	(53)
55. Women should work full-time only before they have children.	☐	☐	☐	☐	☐	(54)
56. The government should be able to force farmers to adopt soil conservation practices if they have erosion problems.	☐	☐	☐	☐	☐	(55)
57. Greater regulation is needed on the use of chemicals in agriculture.	☐	☐	☐	☐	☐	(56)
58. Economic progress that results in the destruction of places of natural beauty needs to be stopped.	☐	☐	☐	☐	☐	(57)
59. Strip mining coal to provide energy for our country is more important than keeping the countryside in its natural condition.	☐	☐	☐	☐	☐	(58)
60. There are good career opportunities in agriculture.	☐	☐	☐	☐	☐	(59)
61. Most work in agriculture can be done by people with little education.	☐	☐	☐	☐	☐	(60)
62. Agriculture is a declining industry.	☐	☐	☐	☐	☐	(61)

(11)

FOR AGRICULTURE STUDENTS ONLY

Beside each of the statements listed below, please indicate how you would rate agriculture students compared to non-agriculture students.

Agriculture students are:	More than non-ag. students 3	Same as non-ag. students 2	Less than non-ag. students 1	
a. Sure of what they want to do in life.	☐	☐	☐	(62)
b. Interested in competing for high grades.	☐	☐	☐	(63)
c. Interested in classical music and good literature.	☐	☐	☐	(64)
d. Friendly and helpful to other people.	☐	☐	☐	(65)
e. Willing to accept new and unusual ideas.	☐	☐	☐	(66)
f. Interested in making a lot of money.	☐	☐	☐	(67)
g. Tolerant of people who come from a different background.	☐	☐	☐	(68)
h. Seriously concerned about the state of the nation and of the world.	☐	☐	☐	(69)
i. Interested in having a good time at college.	☐	☐	☐	(70)

FOR HOME ECONOMICS STUDENTS ONLY

Beside each of the statements listed below, please indicate how you would rate home economics students compared to non-home economics students.

Home Economics students are:	More than non-home ec. students 3	Same as non-home ec. students 2	Less than non-home ec. students 1	
a. Sure of what they want to do in life.	☐	☐	☐	(71)
b. Interested in competing for high grades.	☐	☐	☐	(72)
c. Interested in classical music and good literature.	☐	☐	☐	(73)
d. Friendly and helpful to other people.	☐	☐	☐	(74)
e. Willing to accept new and unusual ideas.	☐	☐	☐	(75)
f. Interested in making a lot of money	☐	☐	☐	(76)
g. Tolerant of people who come from a different background.	☐	☐	☐	(77)
h. Seriously concerned about the state of the nation and of the world.	☐	☐	☐	(78)
i. Interested in having a good time at college.	☐	☐	☐	(79)

APPENDIX C

INSTITUTIONAL QUESTIONNAIRE

[INSTITUTIONAL QUESTIONNAIRE]

REGIONAL STUDY OF AGRICULTURE AND HOME ECONOMICS STUDENTS
DATA FORM FOR INSTITUTION

Name of Institution_____Address_____

Persons supplying information, or other sources: General_____

Agriculture_____

Home Economics_____This form completed by_____

Total enrollment in institution_____Percent male_____Percent female_____

Type of institution:_____1862 Landgrant;_____1890 Landgrant;

_____Other traditionally white;_____Other traditionally black

Are agriculture and Home Economics together or separated administratively in student body?

_____Together in same college or "school" and in same department

_____In same college or "school" but each is a different department or departments

_____In (or are) different colleges or schools

_____No agriculture here

_____No home economics here

Information for Agriculture

Total enrollment_____Male number_____Percent_____Female number_____Percent_____

Total enrollment same time 1970_____male number_____Percent_____Female number _____Percent_____

What principal undergraduate majors are offered?_____none_____ _____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

What three majors have the largest enrollment?_____ _____ _____

Are any graduate or professional degrees offered?_____None_____Masters only

_____Doctoral_____Other (Specify)_____

About what percentage of undergraduate are on a scholarship or other college aid?_____under 10%_____10-24%_____25-40%_____over 50%

Data form

About what proportion of students are believed or known to come from nonfarm backgrounds___under 25%;___25-49%;___50% or more;___no information or estimate

About what percentage are believed to come from:_____farms;_____rural nonfarm and towns under 10,000;_____cities, 10,000-49,999;_____cities over 50,000

How do entrance test scores and other similar measures for students compare with liberal arts students_____substantially lower;_____a little lower;

_____about the same;_____substantially higher;_____a little higher

What student vocational, departmental, or preprofessional clubs are currently active?

_____ _____ _____ _____

_____ _____ _____ _____

What trends in enrollment by majors have been observed since 1970?

Majors increasing their percentage substantially_____ _____

Majors holding about the same percentage_____ _____

Majors decreasing in percentage substantially_____ _____

Since 1970, what new or major student recruiting thrusts have been used? Are efforts focused toward special types or on special needs or opportunities? Are opposite sex students actively recruited? What seems to attract opposite sex (with or without recruiting)? Describe_____

_____

_____

About what proportion of students transfer from junior or community colleges?

_____Under 10%;_____10 to 24%;_____25-49%;_____50% and over

How are placements currently? Do those who want jobs in their fields get something appropriate within six months after graduation?_____Practically all do;_____90% or more do;_____75-90% do;_____there is serious difficulty in placing students appropriately

Data form

Information for Home Economics

Total enrollment____Male number____Percent____Female number____Percent____

Total enrollment same time 1970_____Male number_____Percent_____Female number

_____Percent_____

What principal undergraduate majors are offered?_____None_____

_____ _____ _____ _____

_____ _____ _____ _____

_____ _____ _____ _____

What three majors have the largest enrollment?_____ _____ _____

Are any graduate or professional degrees offered?_____None_____Masters only

_____Doctoral_____Other (specify)_____

About what percentage of undergraduates are on a scholarship or other college aid?

_____under 10%; _____10-24%; _____25-49%; _____over 50%

About what proportion of students are believed or known to come from nonfarm

background _____under 25%; _____25-49%; _____50% or more;

_____no information or estimate

About what percentage are believed to come from: ____farms; ____rural nonfarm

and towns under 10,000; ____cities, 10,000-49,999; ____cities over 50,000

How do entrance test scores and other similar measures for students compare

with liberal arts students_____substantially lower; _____a little lower;

_____about the same; _____substantially higher; _____a little higher

What student vocational, departmental, or preprofessional clubs are currently active?

_____ _____ _____

_____ _____ _____

Data form .

What trends in enrollment by majors have been observed since 1970?

Majors increasing their percentage substantially_____ _____

Majors holding about the same percentage_____ _____

Majors decreasing in percentage substantially_____ _____

Since 1970, what new or major student recruiting thrusts have been used? Are efforts focused toward special types or on special needs or opportunities? Are opposite sex students actively recruited? What seems to attract opposite sex (with or without recruiting)? Describe _____

_____

_____

About what proportion of students transfer from junior or community colleges?

_____Under 10%; _____10 to 24%; _____25-49%; _____50% or over

How are placements currently? Do those who want jobs in their fields get something appropriate within six months after graduation? _____Practically all do; _____90% or more do; _____75-90% do; _____there is serious difficulty in placing students appropriately.

APPENDIX D

LSU CODING SCHEME

LSU CODING SCHEME FOR UNDERGRADUATE MAJORS
IN AGRICULTURE AND HOME ECONOMICS

CODE	TITLE OF MAJOR
01	General Agriculture
02	Agri-Business Management
03	Ag. Economics
04	Agricultural and Farm Management (or Production Economics or Farm/Ranch Economics)
05	Ag. Education (Vocational Agriculture)
06	Ag. Engineering
07	Agri-Communication
08	Mechanical Agriculture (Ag. Mechanics)
09	Agronomy
11	Plant Science (Crop Science)
12	Soil Science
13	Animal Science
16	Dairy Science
23	Entomology
25	Pest Management
28	Plant Protection
29	Food Technology (Food Science)
31	Forest Science
33	Horticulture/Floriculture
36	Poultry Science
39	Range Science (Range Management)
40	Rural Sociology
41	Veterinary Science (Pre-Veterinary Medicine)
42	Wildlife and Fisheries Sciences (Wildlife Biology)
43	Wildlife (Science, Management)
44	Fisheries (Science, Management)
45	Animal Science (Includes Some Pre-Vet)
46	Parks and Recreation (Parks Administration)
47	Plant Pathology
48	Biological Science (Biology, Genetics, Microbiology)
49	Applied Ecology (Conservation, Natural Resources)
50	Landscape Architecture/Design
51	Ornamental Horticulture
52	Agriculture Mechanization and Business
53	Botany
54	Zoology
55	Community and Rural Development
56	Ag. Education (Ag. Extension)
57	Environmental and Resource Economics
58	Environmental Health Science
59	Turfgrass Management
60	Retail Floristry
61	Biochemistry
62	Landscape Contracting
63	Agronomy (Other)
64	Forestry and Wilflife (Includes Management)

79 Non Ag./He. - (Includes Industrial Education, Medical Technology, Distributive Education)
80 Undeclared Major
81 Home Economics, General
82 Home Decoration and Home Equipment (Includes Home Furnishing and Interior Design)
83 Clothing Textiles (Includes Clothing in Industry and Clothing in Business, Textile Science)
84 Consumer Economics and Home Management (Includes Consumer Services and Family Finance)
85 Family Relations and Child Development (Includes:
Child Development/Mental Retardation
Child Development/Early Childhood Education
Child Development/Mental Retardation
Family and Child Development
Family and Childrens' Services
86 Foods and Nutrition (Experimental Foods)
87 Institutional Management (Includes Cafeteria Management, Hotel and Restaurant Management, Dietetics, and Food Service Management)
88 Home Economics Education (Or Vocational Home Ec.)
89 Fashion Design, Merchandising
90 Home Economics Communication (Journalism)
91 Home Economics Extension
98 Housing, Real Estate
99 Nursing (Pre-Nursing)

APPENDIX E

TIMETABLE OF RESEARCH ACTIVITIES FOR DATA COLLECTION

TIMETABLE OF RESEARCH ACTIVITIES FOR DATA COLLECTION: S-114/OBJECTIVE 3

Dates	Research Activity
January 7-31, 1977	S-114 Project Leaders initiate Human Subjects clearance at their institutions
February 6, 1977	Technical Committee meeting to adopt final draft of student questionnaire
February 15, 1977	Sample drawn (except University of Tennessee - see text)
March 7-25, 1977	Initial mail-out of questionnaires to sample by U.S., campus or departmental mail to sample institutions
March 28-April 1, 1977	First follow-up of non-respondents using new questionnaire and cover letter
April 11-15, 1977	Second follow-up of non-respondents using a postcard reminder
April 25-29, 1977	Third follow-up of non-respondents using telephone reminder or personal contact
May, 1977	Continued data collection; early shipment of instruments to central data processing site (LSU)
June 20, 1977	End of data collection

APPENDIX F

Cover Letters for Student and Institutional Instruments

REGIONAL STUDY OF STUDENTS IN COLLEGES OF AGRICULTURE AND HOME ECONOMICS

March 1977

You have been selected as a respondent in the "Southern Regional Study of Students in Colleges of Agriculture and Home Economics (S-114)." This study is being conducted at all of the land-grant universities in the South and at several affiliated universities. The primary purpose of this research is to obtain a better understanding of the reasons students choose to major in agriculture and home economics as well as to study the factors related to career choices.

The enclosed questionnaire is being sent to a small, but representative, number of students at each institution so your response is extremely important. Please take a few minutes to complete the questionnaire and return it within five days. A postage free return envelope is provided.

Your name and address are requested on the questionnaire. This information is needed so that we can contact you again in a few years for another phase of the study. Your answers will be held in the strictest confidence. Results of the study will be presented in reports so that answers on any single question cannot be identified either according to a specific individual or university.

The budget for the study is very limited. Your cooperation in responding to the request immediately will eliminate the need for a second mailing as well as greatly facilitate the success of the project. If you have any questions, please feel free to contact Frank Howell, Mississippi State, telephone (601) 325-5024.

Thank you for your assistance.

Sincerely yours,

Carlton R. Sollie

Carlton R. Sollie
STUDY DIRECTOR

Enclosures

Project Directors' offices: Auburn, Baton Rouge, Blacksburg, Clemson, College Station, Lexington, Las Cruces, Raleigh
Study Director's office: Mississippi State

[FIRST FOLLOW-UP TO STUDENTS]

REGIONAL STUDY OF STUDENTS IN COLLEGES OF AGRICULTURE AND HOME ECONOMICS

April, 1977

Two weeks ago you were sent a questionnaire as a respondent in the "Southern Regional Study of Agriculture and Home Economics Students (S-114)." This study is being conducted at all land-grant universities in the South and at several affiliated universities. The primary purpose of this research is to obtain a better understanding of the reasons students choose to major in agriculture and home economics as well as to study the factors related to these career choices.

Since your completed questionnaire has not been received, another blank one is enclosed. These questionnaires are being sent only to a small, but representative, number of students at each institution so your response is extremely important. Please take a few minutes to complete the questionnaire and return it within three days. A postage free return envelope is provided.

Your name and address are requested on the questionnaire. This information is needed so that you can be contacted again in several years for another phase of the study. Your answers will be held in the strictest confidence. All results of the study will be presented so that answers on any single question cannot be identified either according to a specific individual or university.

The budget for this study is very limited. Your cooperation in responding immediately will eliminate the need for another mailing as well as greatly facilitate the success of the research. If you have any questions, please feel free to contact Frank Howell, Mississippi State, telephone (601) 325-5024.

Thank you for your assistance.

Sincerely,

Carlton R. Sollie

Carlton R. Sollie
Study Director

Enclosure

Project Directors' offices: Auburn, Baton Rouge, Blacksburg, Clemson, College Station, Lexington, Las Cruces, Raleigh
Study Director's office: Mississippi State

[POST CARD SECOND FOLLOW-UP TO STUDENTS]

Researchers conducting the "Southern Regional Study of Agricultural and Home Economics Students (S-114)" have been pleased with the response. Some students, however, still have not returned their questionnaires. If you have not returned yours, won't you please fill it in now and mail it.

Thank you for your cooperation.

Carlton R. Sollie

Carlton R. Sollie
Study Director
Mississippi State, MS 39762

[INITIAL MAILING TO INSTITUTIONS]

REGIONAL STUDY OF STUDENTS IN COLLEGES OF AGRICULTURE AND HOME ECONOMICS

May 4, 1977

Dear

As a part of the "Southern Regional Study of Agricultural and Home Economics Students (S-114)" we are collecting information about the institutions included in the student survey. This information will be used as a basis for profiling those institutions.

Our interest in the students and the institutions is based on increasing enrollments in agriculture and home economics, and we hope you will help us complete the study by providing some information about your institution. A questionnaire is enclosed to assist you in compiling the needed information.

We appreciate very much your cooperation in the student survey. Findings of this survey should be interesting and useful to administrative officers in agriculture and home economics.

Sincerely,

Carlton R. Sollie
Study Director

sh

Enclosure

[FIRST FOLLOW-UP TO INSTITUTIONS]

REGIONAL STUDY OF STUDENTS IN COLLEGES OF AGRICULTURE AND HOME ECONOMICS

June 16, 1977

In May we sent brief questionnaires to Deans of Agriculture and Home Economics at those schools whose students participated in the S-114 Regional Study. The purpose of the questionnaire sent to the Deans is to compile data on the participating institutions to complement data on the agriculture and home economics students.

Twenty of the participating institutions (most are Land Grant schools) have completed their questionnaires and returned them to us. Since we have not received yours we thought perhaps it was lost in the mail or that your school was on summer vacation.

We are enclosing another questionnaire and a return envelope. We hope you will help us complete the study by filling it in and returning it to us. This will enable us to provide an up-to-date report to the Deans on agriculture and home economics in the region.

We will be grateful for your help.

Sincerely yours,

Carlton R. Sollie

Carlton R. Sollie
S-114 Study Director

mem

Enclosures

77

Project Directors' offices: Auburn, Baton Rouge, Blacksburg, Clemson, College Station, Lexington, Las Cruces, Raleigh
Study Director's office: Mississippi State

[SECOND FOLLOW-UP TO INSTITUTIONS]

REGIONAL STUDY OF STUDENTS IN COLLEGES OF AGRICULTURE AND HOME ECONOMICS

August 12, 1977

(addressee)

Dear _____:

Of the 37 colleges and universities participating in the Regional Study of Students in Agriculture and Home Economics, 26 have provided institutional data requested in our letter of June 16. In order to make a complete compilation of institutional characteristics to be used in conjunction with the student data, we need information on (name of school) _____.

We realize that some schools operate with less than a full staff during the summer and that this might be the reason they have not returned the questionnaire. It is important, however, that we have information on all of the participating schools so we can complete processing of the data.

We need data from only eleven schools to complete our file. Will you please help us.

Thank you.

Sincerely yours,

Carlton R. Sollie

Carlton R. Sollie
Study Director

mem

Enclosures

APPENDIX G

NASULGC PRELIMINARY REPORT

Preliminary - November 1976

AGRICULTURAL ENROLLMENT
in the
NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND-GRANT COLLEGES
MEMBER INSTITUTIONS

A Report to the Resident Instruction Section
Division of Agriculture
Washington, D.C.
November 14-17, 1976

Report compiled by Norma Hensley, Secretary
for
Dr. Louis M. Thompson, Associate Dean of Agriculture
Iowa State University

The 1976 fall term enrollment for baccalaureate degree programs in Agriculture shows an increase of 6.5 percent for the 70 member institutions of NASULGC. There are 98,183 undergraduates compared to 92,161 in the previous year. With respect to classes the changes were: Freshmen - increased by 328, Sophomores - increased by 1116, Juniors - increased by 2073, and Seniors - increased by 2916.

The University of California has the largest enrollment with three campuses. In terms of single campus enrollments, the largest are (1) Texas A&M - 4151, (2) California-Davis - 3838, (3) Ohio State - 3822, (4) Purdue-Lafayette - 3714, (5) Iowa State - 3409, and (6) Michigan State - 3258.

Fifty-four institutions had gains in enrollment while 12 had losses, three neither gained nor lost and one has no agriculture enrollment. The institutions with largest gains were (1) New Jersey-Rutgers - 951, (2) Virginia Poly Tech - 501, (3) California-Davis - 348, (4) Texas A&M - 305, (5) University of Arizona - 273, (6) Michigan State - 233, (7) University Park Pennsylvania - 224, (8) University of New Hampshire - 193, (9) Ohio - 156, (10) Kansas State - 150.

Undergraduate enrollment in Agriculture in the National Association of State Universities and Land-Grant Colleges more than doubled from 1963 to 1976, an increase of 181 percent. The long-term trend in enrollment in Agriculture is shown graphically on page 5.

Sixty-three institutions reported 27,700 undergraduate women in Colleges of Agriculture, which indicates over 28 percent women in Agriculture in the NASULGC.

The graduate college enrollment data indicated an increase of 6.8 percent from 1975 to 1976. The four areas with the largest enrollment continue to be (1) Agricultural Economics - 2538, (2) Animal Science - 2489, (3) Agronomy - 2407, and (4) Agricultural Education - 1990.

TABLE I Resident Undergraduate and Terminal Enrollment in Agricultural and Related Curricula Administered in the NASULGC Member Institutions by Institution and Type of Program - Fall Term

STATES	BACCALAUREATE DEGREE PROGRAM (DVM & Home Economics not included)					No. in 2 or 3 Yr. Program		No. Undergrad Women	
	1963	1973	1974	1975	1976	1975	1976	1975	1976
Alabama Auburn U	474	936	1049	1282	1424			224	277
Alabama A&M	61	164	192	251	258			11	38
Arizona U of	496	895	1092	1296	1569			468	572
Arizona St U	247	316	412	451	460			136	152
Arkansas U of	272	495	526	712	777			134	161
Arkansas Pine Bluff	70	79	73	95	107			15	12
California U of	874								
Berkeley		780	1012	1026	1184			462	606
Davis		2729	2928	3490	3838			1593	1776
Riverside		929	1276	1402	1402			NA	NA
Colorado St U	610	891	1046	1175	1269			429	458
Connecticut U of	242	760	995	1227	1344	148	138	525	635
Delaware U of	206	636	743	875	957	54	20	308	369
Delaware St C	16	91	82	133	165			14	22
Florida U of/1	222	805	943	1156	1182			348	381
Florida A&M	49	106	110	156	127			27	NA
Georgia U of	726	845	988	1209	1392			299	NA
Georgia Fort Valley	38	72	118	258	165			3	4
Hawaii U of	102	279	330	461	465			134	150
Idaho U of	276	341	369	432	405			71	59
Illinois U of	961	1636	1693	1696	1750			472	544
Illinois Southern U	607	800	832	1002	1112			185	252
Indiana Purdue U	1471					236	287	946	1085
Lafayette Campus		2829	3185	3575	3714				
Regional Campuses		396	463	249	315				
Iowa St U	1853	2939	3058	3282	3409			525	658
Kansas St U	720	1699	1918	2181	2331			486	597
Kentucky U of	401	1054	1221	1355	1393	15	16	415	458
Louisiana St U	607	705	788	889	822			161	178
Louisiana SU & A&M	60	134	135	150	134			10	12
Maine U of	498	1513	1445	1889	1870	442	423	695	775
Maryland U of	435	1008	1193	1535	1663	105	134	611	695
Eastern Shore	33	62	61	67	47			7	5
Massachusetts U of	345	1918	2315	2928	2711	581	569	1038	995
Michigan St U	1177	2292	2604	3025	3258	619	608	999	1204
Minnesota U of	1200	1832	2056	2360	2478	1635	1843	632	713
Mississippi St U	501	740	1079	1193	1274			157	183
Alcorn St U	50	210	203	231	232			10	13
Missouri U of	969	2258	2398	2730	2715			520	589
Lincoln U	31	57	38	54	62			10	10
Montana State U	407	851	918	972	1003			203	215

TABLE I Continued

STATES	BACCALAUREATE DEGREE PROGRAM (DVM & Home Economics not included)					No. in 2 Or 3 Yr. Program		No. Undergrad Women	
	1963	1973	1974	1975	1976	1975	1976	1975	1976
Nebraska U of	765	1449	1421	1517	1657	270	285	176	234
Nevada U of	115	395	453	512	535	44	47	126	171
New Hampshire U of	214	1216	1537	1294	1487	550	550	764	684
New Jersey Rutgers	431	1670	2097	1571	2522			779	966
New Mexico St U	414	940	1042	1146	1248	53	96	225	293
New York Cornell	1909	2813	2826	2929	2976			1118	1243
North Carolina St U	686	2304	2570	2900	2668	381	377	1031	975
North Carolina A&T	467	82	135	157	157			NA	NA
North Dakota St	561	782	763	921	1070		13	139	200
Ohio St U	1740	3090	3430	3666	3822	600	735	886	1039
Oklahoma St U	1168	1595	1734	1922	2112			271	375
Oklahoma Langston	22	16	20	26	27				2
Oregon St U	673	1072	1136	1184	1250			337	372
Pennsylvania St U/2	1001					331	331	881	1032
University Park		1598	1926	2206	2430				
Commonwealth Campuses		942	1032	1256	1233				
Puerto Rico U of	161	458	499	592	680			123	153
Rhode Island U of	230	661	781	949	975	91	78	298	338
South Carolina-Clemson	555	466	602	757	810			206	276
South Carolina St C	34	5	5	0	0			0	0
South Dakota St U	759	1281	1297	1235	1355	15		158	196
Tennessee U of	538							316	502
Knoxville		953	1191	1549	1687				
Martin		397	483	571	644				
Tennessee St U	100	86	86	119	167			13	18
Texas A&M	1027	2606	3185	3846	4151			845	1097
Texas Tech	937	1336	1406	1470	1524			199	236
Texas Prairie View	90	91	96	84	46			6	NA
Utah St U	267	433	443	506	472	81	93	109	98
Vermont U of	212	874	911	904	904			378	427
Virginia Poly Tech	460	1533	1976	2200	2701			NA	875
Virginia St C	90	61	70	65	79			6	10
Washington St U	515	1087	1290	1560	1693			NA	NA
West Virginia U of	497	1335	1107	1208	1319			NA	NA
Wisconsin U of	741	1523	1877	2452	2510			870	900
Wyoming U of	266	412	422	437	489			111	135
	34,952	72,644	81,736	92,161	98,183	6,251	6,643	23,654	27,700

/1 All freshmen and sophomores are enrolled in a two-year university college program, therefore, freshman and sophomore data are not available.

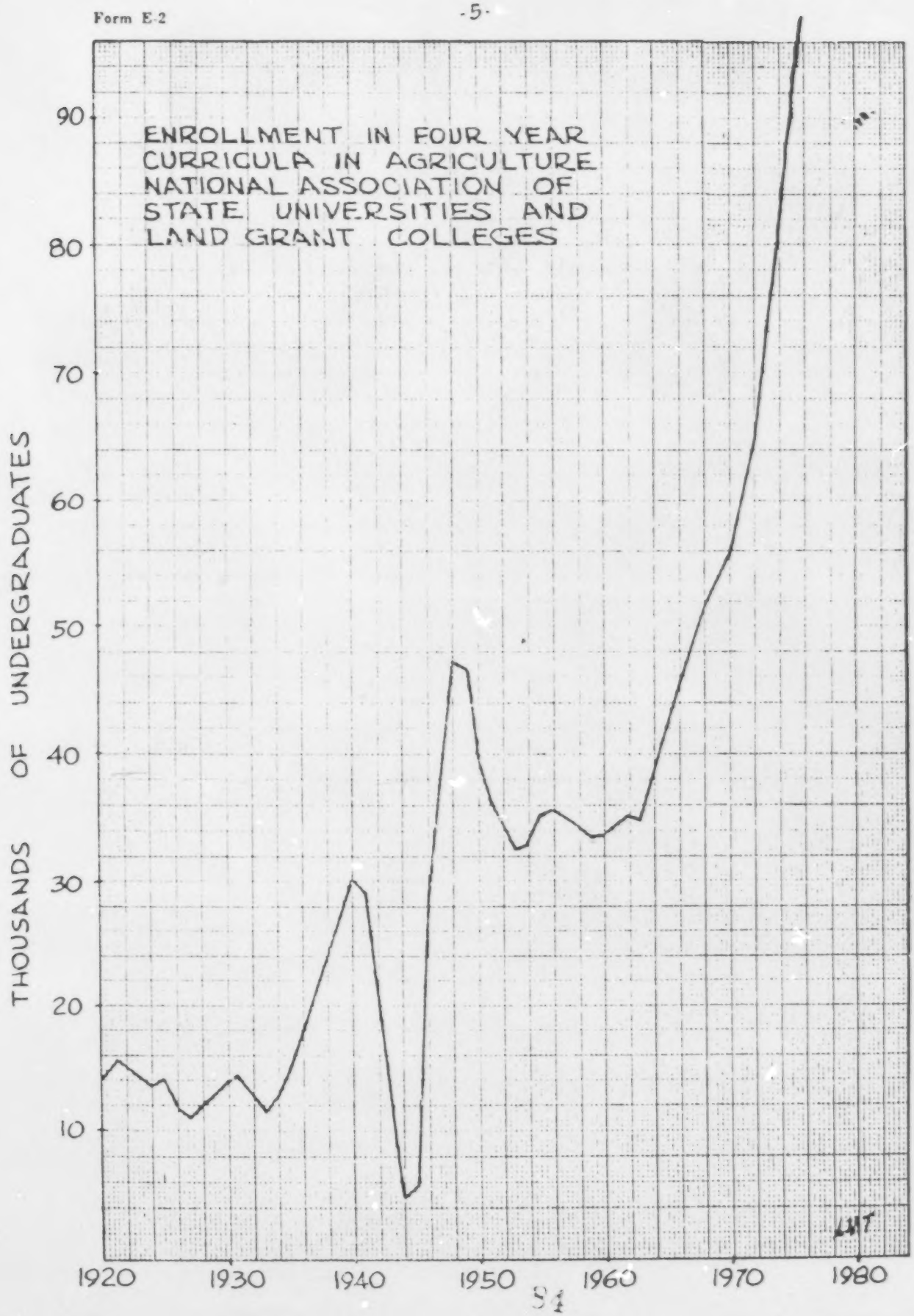
/2 Administered under one dean

TABLE II Fall Enrollment of Undergraduates in Agriculture by Classes and by Years.

CLASSES	1950	1955	1960	1965	1975	1976
Freshman	10,196	11,207	10,336	13,101	23,615	23,943
Sophomore	9,444	8,617	7,649	9,921	20,517	21,633
Junior	9,729	7,558	7,489	9,097	24,042	26,115
Senior	10,606	6,829	7,054	8,557	21,921	24,837
Other	1,375	846	891	1,081	2,066	1,655
	41,350	35,057	33,419	41,757	92,161	98,183

TABLE III Graduate Enrollment in Agriculture - First Term Opening Report 1971-75, in Curricula Administered by Deans of Agriculture.

FIELDS OF STUDY	1971	1972	1973	1974	1976
An. S. (Beef, Swine, Sheep)	1,140	1,201	1,308	1,066	1,505
An. S. (Dairy)	331	304	364	763	687
An. S. (Poultry)	220	195	210	219	297
Dairy Mfg. or Food Technology	887	974	925	1,091	998
Fish & Game or Wildlife Mgt.	869	1,052	986	1,379	1,455
Pl. S. (Agron., Crops, Soils)	2,021	1,975	1,838	2,093	2,407
Pl. S. (Hort., Fruit & Veg.)	699	746	802	1,219	1,184
Pl. S. (L.A., L.Des., Orn. Hort.)	219	215	406	231	386
General Agriculture	55	218	290	111	346
Agriculture - Other	425	542	588	592	495
Sub-Total	6,866	7,422	7,717	8,764	9,760
Ag. Econ. (F. Mgt. & Rural Soc.)	2,053	2,068	2,013	2,541	2,538
Ag. Ed. (Extension Training)	1,511	1,967	1,525	1,960	1,990
Ag. Engr. (Ag.Equip. & Mech.)	496	428	473	492	522
Forestry (Wood Utilization)	761	776	791	899	1,014
Sub-Total	4,821	5,239	4,802	5,892	6,064
RELATED SCIENCES					
Gen. (Biol., Bact., Genetics, Geo.)	943	1,155	1,111	1,247	1,232
Pl. S. (Bot., Pl. Path., Pl. Phys.)	1,092	1,160	1,143	1,341	1,359
An. S. (Ent., Zoo., An. Nutrition)	1,714	2,293	1,738	1,952	1,909
Other	791	911	1,161	1,521	1,809
Sub-Total	4,540	5,519	5,153	6,061	6,309
GRAND TOTAL	16,227	18,180	17,672	20,717	22,133


ENROLLMENT IN FOUR YEAR CURRICULA IN AGRICULTURE NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND GRANT COLLEGES
THOUSANDS OF UNDERGRADUATES
90
80
70
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1920
1930
1940
1950
1960
1970
1980